

MAY, 1965

AIRFIX

magazine FOR PLASTIC MODELLERS

MONTHLY **1'6**



**IN
THIS
ISSUE**

**New Airacobra and Buffalo amphibian kits
Converting the Airfix Sherman to a Priest**

JUST LIKE THE REAL THING!

The 66,000-ton "France" is the longest liner in the world, carries 2,000 passengers and a crew of 1,000. Launched in 1962, it cost almost £30,000,000 to build. This superb 1/600 scale model will make a wonderful companion to the Airfix "Queen Elizabeth" and "Canberra" 148-part kit—only 10/6.

There are over 200 Airfix Kits covering 13 different series. And at 2/- to 17/6 you can well afford to make all your models *just like the real thing!*



AIRFIX CONSTANT SCALE

CONSTRUCTION KITS

Just like the real thing!

From model and hobby shops, toy shops and F. W. Woolworth

STOP PRESS

MESSERSCHMITT

Bf 109 G-6

Exciting 1/72 scale model of the most famous German plane which became the standard Luftwaffe fighter of the Second World War. It had a top speed of 390 m.p.h. and a normal range of 450 miles.

38 part kit—2/-

ALSO NEW! J.U. 52

A 1/72 scale model of Germany's most famous bomber and troop carrier.

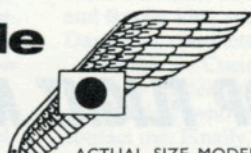
109 part kit—7/6



AIRFIX MAGAZINE 1/6d Monthly
.. CATALOGUE 9d

1/72nd scale TAMIYA KITS

B.M.W. again keep you right up to date with these rare specially imported kits



ACTUAL SIZE MODEL
TAMIYA FLIGHT SERIES



THE NAVY TYPE ZERO
CARRIER FIGHTER
TYPE 32 (HAMP)

THE NAVY INTERCEPTOR
FIGHTER "RAIDEN" (JACK)

not illustrated

THE ARMY TYPE 2
FIGHTER "SHOKI" (TOJO)



DELIVERY

These kits should be clear of customs for delivery at end of May. Supplies are good but re-orders will take some months, so order early.

each Kit 6/11

and at long last—from U.S.A.
1/4 scale AURORA Albatross 2 seater
World War I Breguet 14, 13/- each

Two Aurora models are
Fokker Eindekker 10/3 Sopwith Triplane 10/3

MODEL RAILWAY CONSTRUCTION KITS

PECO WAGON KITS 00

Baddesley 7-plank Coal	10/6
Mendip Mountain Quarries Co. 5-plank mineral	9/6
Joseph Cole & Son Ltd. 5-plank mineral	9/6
The Cliffe Hill Granite Co. Ltd. 7-plank Coal	10/6
Crawshaw Brothers Lime wagon	11/6
Kingsbury 7-plank Coal	10/6
Charles Dunsdon 5-plank mineral	9/6
B.Q.C. low sided 3-plank	9/6
SR Brown low sided 3-plank	9/6
LMS grey low sided 3-plank	9/6
GWR low sided 3-plank	9/6
Dowlow Lime lime wagon	11/6
T. Jenkerson & Sons 7-plank	10/6
A. Gresley & Co. 5-plank mineral	9/6
Pwllheli Granite low sided 3-plank	9/6
Lawrence & Co., Groves Co. Ltd., Park Gate, 1/4 each.	
Set of underframe parts complete but for wheels, 2/10 each.	

PECO ROADRAILER

Kit No. 1 Road tractor and rail adapter bogie and Roadrailer box van	7/6
Kit No. 2 Box van only	3/-
Kit No. 3 Roadrailer tractor and adaptor bogie	4/6

WILLIAMSON WAGON SIDES

Correctly printed sides and ends on stout card for the following private owner open wagons:

AIRFIX 1/32nd

Lotus Cortina, motorisable 2/-

STROMBECKER SHELLS

CLASSIC CORVETTE
1962 FORD (USA)
PONTIAC STOCK CAR
Ferrari Testa Rosa; 'D' Type Jaguar; Jaguar XKE. 13/6 each

REVELL

1/32nd CHASSIS

As with Revell car kits but suitable for many other shells 8/6

1/32nd BODIES

Corvette Stingray; Jaguar XK E; Ferrari 250 GTO; Shelby's Cobra Ford 10/-
REVELL MOTOR 15/-

REVEL KIT SPARES

Tyres, Special Racing formula Dunlop Set of 4	3/6
Precision machined metal Wheels complete with threaded hub lock nuts Set of 4	4/-
1/2 axles, 5/40th thread, two Slot guides with braids and fixing parts	4/-
Spare gears, 32 or 24 tooth	2/6

B.M.W.

MODELS

PERSONEL CALLERS WELCOME

THE MODEL MAIL ORDER HOUSE

329 HAYDONS ROAD, WIMBLEDON S.W.19 LIB 7707



For all modelling and hobby requirements, personal shoppers should go to the following branches, where the best kits and expert advice are always available.

LONDON

78a New Oxford Street, W.C.1 Tel: MUSeum 2975.
87 Old Broad Street, E.C.2 Tel: LONdon Wall 4375.
81 Streatham Hill, S.W.2 Tel: TULse Hill 8796.
151 High St., Walthamstow, E.17 Tel: COPpermill 3928

GLASGOW

328-330 Argyle Street, Glasgow, C.2 Tel: CENtral 5042

MANCHESTER

10 Piccadilly, Manchester, 1 Tel: CENtral 1787

BIRMINGHAM

18 Moor Street, Ringway Tel: MIDland 0219

SHEFFIELD

4 St. Paul's Parade, Sheffield 1 Tel: 26071

LEEDS

10 Queen Victoria Street Tel: 28639

HULL

42 Savile Street Tel: 32959

SOUTHAMPTON

134 High Street (Below Bar) Tel: 25947

BRISTOL

65 Fairfax Street, Bristol, 1 Tel: 23744

NEWCASTLE

42 Dean St, Newcastle upon Tyne, 1 (continuation of Grey Street) Tel: 21465

EXETER

9 North Street Tel: 76661

LEICESTER

25 Charles St, Tel. 24830 (Opp. Safeway Supermarket)

Free kit brochure on request from head office

HOBBIES LTD. • DEREHAM • NORFOLK



TOP FLIGHT MODELLERS . . . USE TOP FLIGHT FINISHES



'JOY' New Formula PLASTIC ENAMEL

The 18 beautiful contemporary colours, including black and white, can be intermixed to provide a wide range of colours. Joy Plastic Enamel has good flow, is resistant to heat and most fuels. It gives glass-hard abrasion and a wear resisting surface.

Tins 1/-; 1/9; 3/3; 5/6.

Also available in a special pack containing 6 bottles and brush. 3/6 complete.



'JOY' LUMINOUS PAINT

(Green shade only)
See in the dark outfits, containing Base, Reflecting Coat, and Luminous Top Coat.
Packs 2/6; 4/6.



'JOY-PLANE' BALSA CEMENT



New and improved quality.
Very quick and hard setting.
Penetrates deeply and is heat resisting and fuel proof.

Available in tubes
8d.; 1/2d.; 1/10d.

'JOY-PLANE' POLYSTYRENE CEMENT



Non-stringing, quick drying and colourless. The perfect adhesive for giving a weld joint to any Polystyrene surface.

Available in tubes 8d.

OTHER PRODUCTS MADE BY MODELLERS FOR MODELLERS

'JOY-PLANE' CELLULOSE DOPES. 1/-; 1/9.
'JOY-PLANE' CLEAR DOPES. 1/-; 1/9; 2/6; 4/6.
PLASTIC WOOD. 1/3; 2/3.
BANANA OIL. No. 1. Thick;
No. 2. Thin. 1/-; 1/9.
TISSUE PASTE. Tubes 1/-



is the registered trade mark of

TURNBRIDGES LTD., LONDON, S.W.17

manufacturers of quality products for

STICKING, STAINING, POLISHING, PAINTING

Airfix Magazine

AIRFIX

magazine

FOR PLASTIC MODELLERS

Volume 6, Number 9

May, 1965

CONTENTS

NEWS FROM AIRFIX

New 1:72 scale Bell P-39Q Airacobra and OO/HO scale LVT(4) Buffalo amphibian kits 260

IN THE AIR

How Royal Navy helicopter pilots are trained, by **Alan W. Hall** ... 262

BASIC RAILWAY MODELLING

Problems of point control and how to overcome them, by **Norman Simmons** ... 264

SHIPPING NOTES

Giant tankers, a ship with an unconventional silhouette, and a new class for the Clan Line are featured in **A. J. Day's** nautical news ... 266

SMALLEST SCALE YET

Mike Bryant discusses N Gauge, a new development in railway modelling ... 268

WHEELSPIN

How to build a four-wheel drive Airfix Auto-Union, by **Bert Lamkin** ... 270

MILITARY MODELLING

C. O. Ellis describes how to convert the Airfix Sherman into a Priest ... 272

LAYOUT REALISM

Alex Bowie discusses progress on his 'Cowbell' line ... 274

PROFILE

The history of the Bell Airacobra, a fighter ahead of its time, by **M. J. F. Bowyer** ... 276

NEW BOOKS

Some recent titles, reviewed with modellers in mind ... 279

NEW KITS AND MODELS

Latest releases of interest to modellers ... 280

LETTERS TO THE EDITOR

The page where you have the chance to tell us what you think—and earn yourself a free Airfix plastic kit ... 284

COVER PICTURE

The only British aircraft designed from the outset as an all-cargo carrier, the Hawker Siddeley Argosy has simple and unobstructed double-end loading facility at truck-bed height. The aircraft illustrated here, a Series 220, provides a vital link between international routes and regional networks. Typical payload is one of 31,000 lb over a distance of 500 miles at around 275 mph.

(Illustration by courtesy of 'The 748 Journal'.)

Editorial Director **JOHN BLUNSDEN**
Editor **DARRYL REACH**
Assistant Editor **DOUGLAS NYE**
Advertisement Director ... **PATRICK STEPHENS**

AIRFIX magazine is published on the fourth Wednesday of each month. Annual subscription rate 24s.
(Second Class postage paid at New York Post Office, NY.)

NEXT PUBLICATION DATE:
May 26, 1965

EDITORIAL OFFICES

Brands Hatch Circuit, Fawkham, Dartford, Kent
Telephone: West Ash 411

ADVERTISEMENT DEPARTMENT

3-4 St Andrew's Hill, London, EC4
Telephone: CITY 4288

CIRCULATION DEPARTMENT

Surridge, Dawson (Productions) Ltd,
136/142 New Kent Road, London, SE1
Telephone: RODney 5480

NEWS FROM **AIRFIX**

The world's greatest value in construction kits

New Buffalo LVT and Airacobra

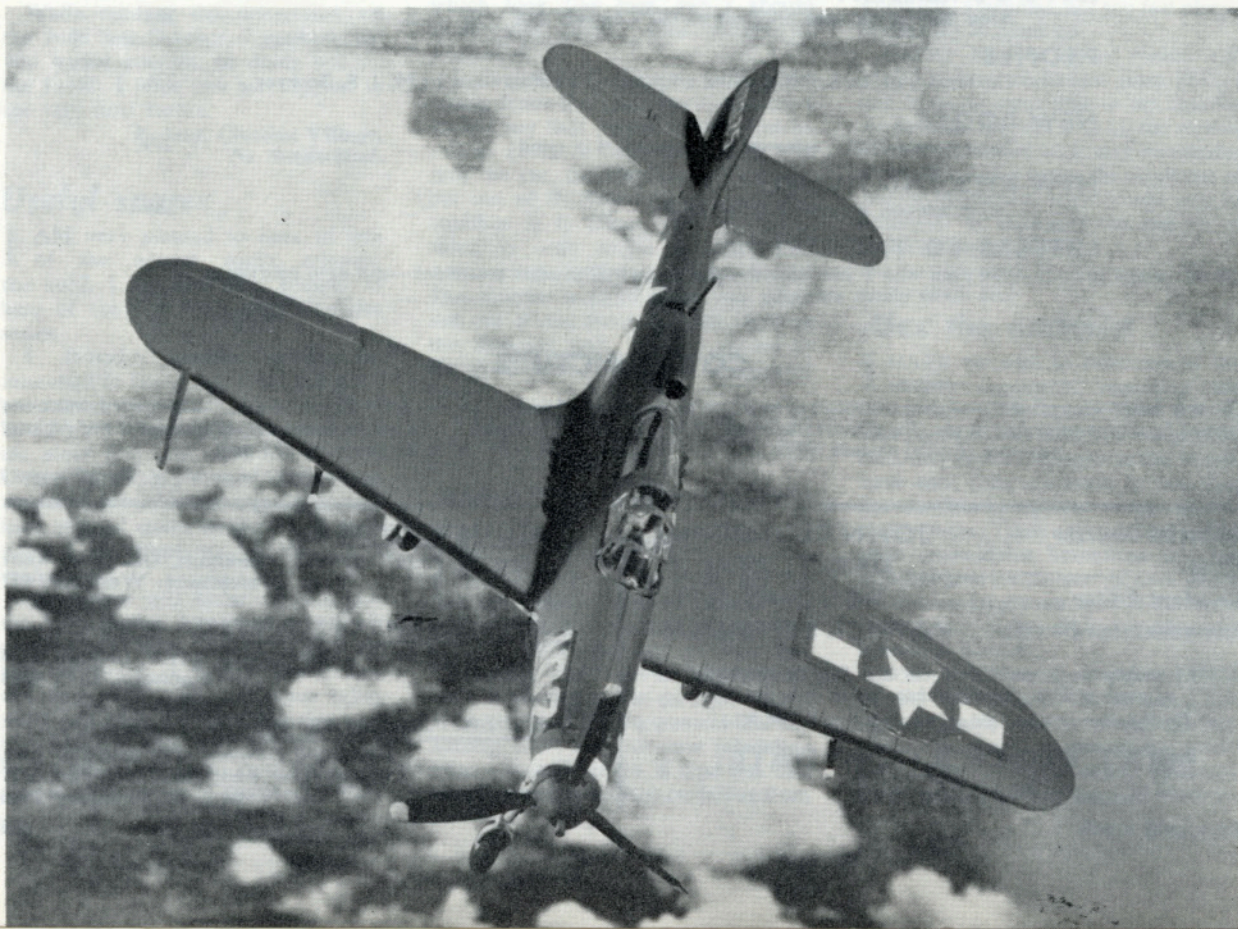
LATEST recruits to Airfix's model armed forces are a fine OO/HO scale replica of an LVT(4) Buffalo amphibian and a 1:72 scale Bell P-39Q Airacobra fighter 'plane. Undoubtedly this month's star release, as far as the military modelling fraternity is concerned, is the new two-part Buffalo kit. For only 3s, the kit includes the Buffalo LVT itself, full painting and assembly instructions, a nine-item transfer sheet and an excellently detailed, 32-part Willys Jeep. The 105 dark green and transparent plastic parts of the whole kit feature plenty of fine detail and go together really well to form two handsome miniatures.

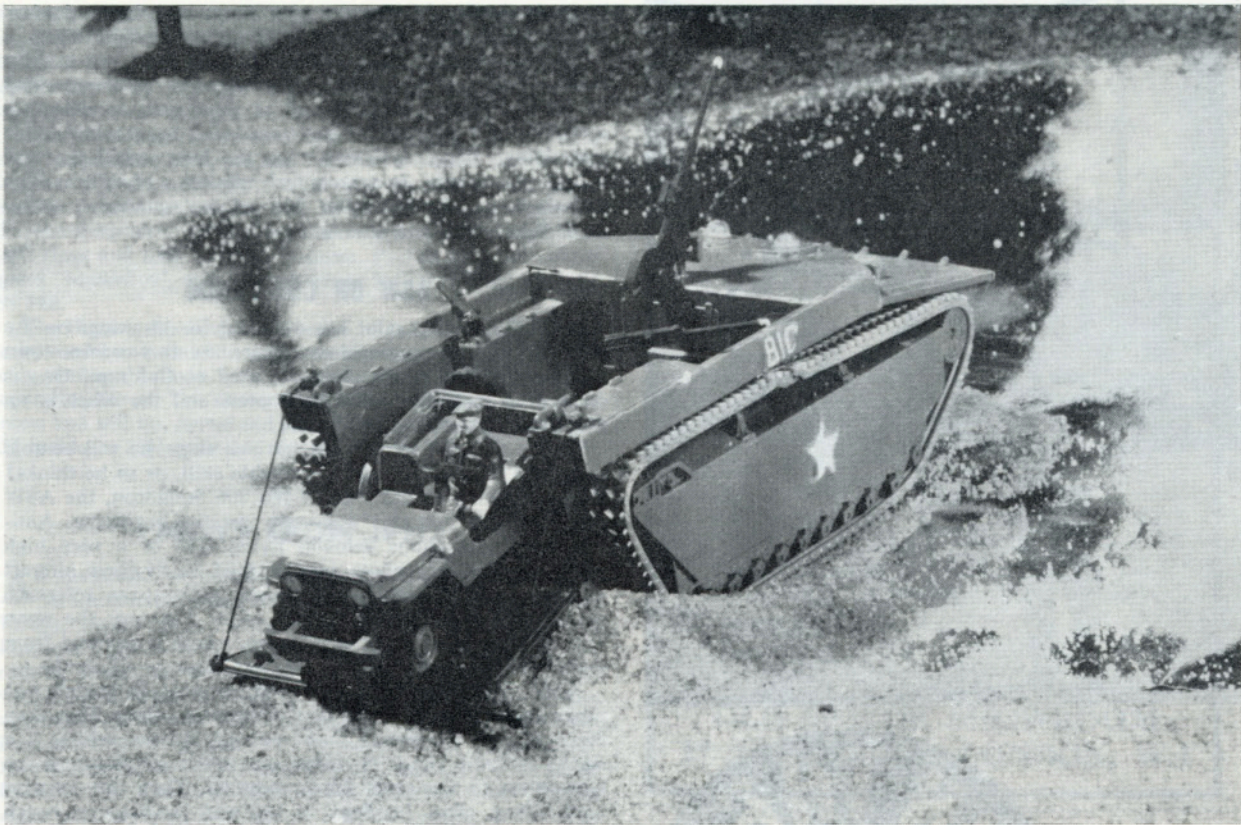
Moving parts on the LVT include the 22 tiny idler wheels and four main sprockets of the running gear, the flexible tracks, an elevating cannon, two swivelling machine guns and an opening stern ramp. Two thin clips hold the ramp in position when closed, and it can be easily snapped open when required. Two forward hatch covers may be cemented in either the open or closed positions, and etched detail includes armour panelling, rivets, sprocket teeth, ramp treads and locker top hinges.

The Jeep is built up around a highly detailed chassis and includes moulded four-wheel drive transmission, leaf springs, revolving wheels, jerrycan, spare wheel, seats, driver and steering wheel. A realistic feature is the transparent windscreen which hinges forward over the bonnet.

The Landing Vehicle, Tracked (Mk 4), used by British forces in the latter stages of the last war, was one of the many amphibious vehicles designed for the American Army. Better known as the Buffalo, it first saw service in the Pacific Islands, and later in Italy and north-western Europe. The particular LVT

A 1:72 scale replica of the Bell P-39Q Airacobra has joined the two-shilling Airfix aircraft range. Comprising 37 parts, and transfers giving alternative Soviet or US Air Force markings, it has a wingspan of 5½ inches.





Newest OO/HO scale Airfix fighting vehicle model is this two-part LVT(4) Buffalo amphibian, which comes complete with a Jeep and sells for 3s. The Airfix Buffalo is 4 inches long, the Jeep 1½ inches long.

modelled by Airfix depicts one used by the British Army in the crossing of the Rhine. Propelled on both land and water by its cleated tracks, the Buffalo was powered by a seven-cylinder air-cooled Continental engine giving it a land speed of 25 mph, or 5.4 knots afloat. Up to 6,500 lb of cargo could be carried, and usual loads were anti-tank guns, carriers or, as in this case, a Jeep. British Buffaloes were usually armed, and typical weapons used were one 20 mm cannon and two .5 inch machine guns.

One of the best known of all American vehicles, the Jeep was employed by all the Allied nations in the Second World War. Almost half a million were built and it won fame as the truck that could do anything and go anywhere. It was powered by a 54 hp engine, had a top speed of 65 mph and could carry a payload of 800 lb. Jeeps could tow such loads as the 6 pdr anti-tank gun, a model of which is already available in the Airfix range to the same scale. The Airfix Buffalo is 4 inches and the Jeep 1½ inches long.

BELL P-39Q AIRACOBRA

THE new 1:72 scale Airfix model of the Bell P-39Q Airacobra joins the popular, packeted range of Airfix model aircraft, priced at 2s. This exciting kit of an unusual aircraft includes comprehensive painting and assembly instructions and a two-part display stand. A 17-item colour transfer sheet, giving alternative Soviet or US Air Force markings, is also provided.

Moulded in pale grey plastic, the 37-part kit has several interesting features. The cockpit canopy is in two pieces, with separate transparencies forming the door windows on either side of the fuselage. A miniature 37 mm cannon pokes threaten-

ingly out of the spinner of the three-bladed, revolving propeller, while twin underwing gun-packs and a thin pitot tube grace the accurately shaped wings, with their upturned tips. A large drop-tank is slung in a two-part cradle beneath the fuselage.

The complex, tricycle undercarriage may be fitted either retracted or lowered, and some weight is needed in the nose to make the completed model stand correctly on all three wheels if the display stand is not used. Other features include the stub exhaust pipes protruding from either side of the fuselage mid-section, a wireless aerial and a variety of etched detail depicting intakes, vents, panel and rivet lines.

First conceived in June, 1936, this aircraft was unorthodox in having the engine mounted behind the pilot. This seemed to offer several advantages; a heavier nose armament could be carried, better visibility was possible and a tricycle undercarriage could be used. The prototype, XP-39, flew in April, 1939, and the first Airacobras joined the USAAC in 1941. The RAF found the P-39 unsuitable for its requirements and the machines it had on order were diverted to the Soviet Union. There they were a great success in the ground-attack role, but the Airacobra had failed as an interceptor. It was powered by a 1,325 hp Allison engine and had a maximum speed of 385 mph. Armament consisted of one 37 mm cannon and four .5 inch machine guns. The P-39Q also carried a further two .5 inch machine guns in pods beneath the wings, replacing the .3 inch wing-mounted guns of the earlier variant. Span of the Airfix model is 5½ inches and length 5½ inches.

A Profile article on the history of the Airacobra, by M. J. F. Bowyer, appears in this issue on page 276.



learn the basis of helicopter operations, and then a further 41 hours are spent flying the more advanced Whirlwinds.

Courses last a total of 18 weeks and there are usually nine students on each course. The squadron is commanded by Lt Commander A. Casdagli, a pilot with considerable experience in helicopter operations, who has 11 helicopter instructors, three crewmen, for teaching winching and rescue operations, two technical officers and 120 ratings to help him. The helicopter fleet of the squadron consists of 10 Whirlwinds and nine Hillers.

ASW OR COMMANDO

Once the student pilot has qualified for his wings on the Whirlwind he then specialises. There are two courses open to him, both of which are completed at Culdrose. One is on Wessex anti-submarine helicopters and the other is on the Wessex Mk 5 commando unit.

By the time the student reaches this stage, he will be able to handle his aircraft with reasonable skill, or so he thinks! When speaking to the staff of No 706 Squadron, the ASW unit, I found that this was only just the beginning. Anti-submarine operations demand flying skill of a very high order. Operational pilots are required to fly their aircraft in the very worst conditions, at night, without any reference points and at a constant height of 30 feet over the wave tops, so that their sonar equipment, which is lowered from under the fuselage into the sea, can operate efficiently.

After converting to the Wessex, student anti-submarine pilots go on to get a white card instrument rating. They then learn to use the Mk 3 flight control system, which is a semi-automatic 'black box' that assists flying anti-submarine helicopters to the exact limits required. They also practise load lifting, deck landings at sea and landings in rough country. Armament also features prominently in their curriculum. After successfully passing the 16-week course, pilots then go on to the operational anti-submarine school at Portland before being posted to a squadron.

No 707 Squadron, the Commando training unit at Culdrose, is staffed almost entirely by members of the squadron which so ably demonstrated the use of the Wessex in Borneo. When I visited their headquarters they showed me, by means of some excellent slides, the conditions under which they worked in the Borneo jungles. Marine Commando patrols were sent out from small clearings in the solid mass of foliage once a report had come in about Indonesian activities. The helicopters moved both men and supplies around their vast area with the greatest of ease—



THE fact that only one squadron of Royal Navy Wessex helicopters, together with Royal Marine Commandos, patrolled an area the size of Wales with considerable success during the recent skirmishes in Borneo gave me the idea of finding out more about the training for this work, and to get a first-hand impression I visited the Royal Naval Helicopter School at HMS Sea Hawk, Culdrose, Cornwall, last month.

The work of the school is divided into four fairly equal parts. Student pilots, having completed their basic naval training at Dartmouth, go to RAF Linton-on-Ouse, in Yorkshire, for an 18-week course involving 75 flying hours on the Chipmunk. They then come to Culdrose to start helicopter training and are first introduced to No 705 Squadron, the Navy's initial flying training unit for helicopter work.

Some 50 flying hours are spent on the Hiller UH-12E to

Above, left: 'Down a bit'—The deck landing officer on HMS Lofoten directing a student pilot in Wessex 1, XN 842, on to the spot. Below: Start up! One of the student pilots of 705 Squadron makes ready for a solo sortie.



or so it appeared. The skill of the pilots and crewmen on the Wessex was unsurpassed in the way they were able to do this unenviable job in the heat and primitive conditions of that rather remote part of the globe.

The student commando unit pilots go through a series of exercises in co-operation with troops. They have to be highly skilled in map reading, armament, load lifting and landing their aircraft both at sea and in rough or mountainous country. No 707 Squadron staff insisted that once a pilot has become operational on the Wessex and has had about two years experience he can rank as one of the best qualified helicopter pilots in the world. From what I could see from my brief stay at Culdrose they were most certainly right.

GROUND SCHOOL

No pilot can be efficient at his job without a great deal of time being spent in the classroom. Ground subjects for all pilots, whatever their stage of training, are covered at Culdrose in the Ground Training School. They are taught all the rudiments of airmanship, navigation and meteorology by instructors, many of whom are civilians formerly in the Royal Navy.

A pilot has to thoroughly understand his aircraft and is taught the meaning and function of all the systems and the engine. It is not normal for aircrew to do their own maintenance even in the remotest of postings, but they have to know sufficient about the subject to be able to tell the likely cause when anything goes wrong both in the air and on the ground.

Aircraft, ship and tank recognition feature high on the syllabus. A total of 23 hours are spent on this subject during the course, and the aircraft recognition alone covers more than 100 aircraft. I was extremely impressed by the standard required for a subject which can all too easily become of second-rate importance in peacetime.

I was able to experience the high standard of flying needed by the Navy's helicopter pilots when I flew in one of 707's Wessex 5s out over the Channel to do deck landings on the converted tank landing craft HMS *Lofoten*. This vessel is used for practice landings and refuelling at sea. She has a small landing area similar to that now seen on the sterns of many destroyers and corvettes.

My pilot saw the *Lofoten* ages before I did. Her low silhouette was practically indistinguishable from the wave tops to my unaccustomed eyes until we were almost overhead. There followed a most complicated manoeuvre. The helicopter had to draw level with the landing area, fly backwards at the same speed as the ship, then sideways until it had lined up with the exact landing spot some 15 feet above the deck. Only then did the deck landing officer indicate that we could descend. This precise flying looked difficult enough in fine weather, but I learned that the *Lofoten*'s crew thought that this was a 'piece of cake' for the time—'You should see what it is like when it gets really rough!' they said.

IMPRESSIVE PERFORMANCE

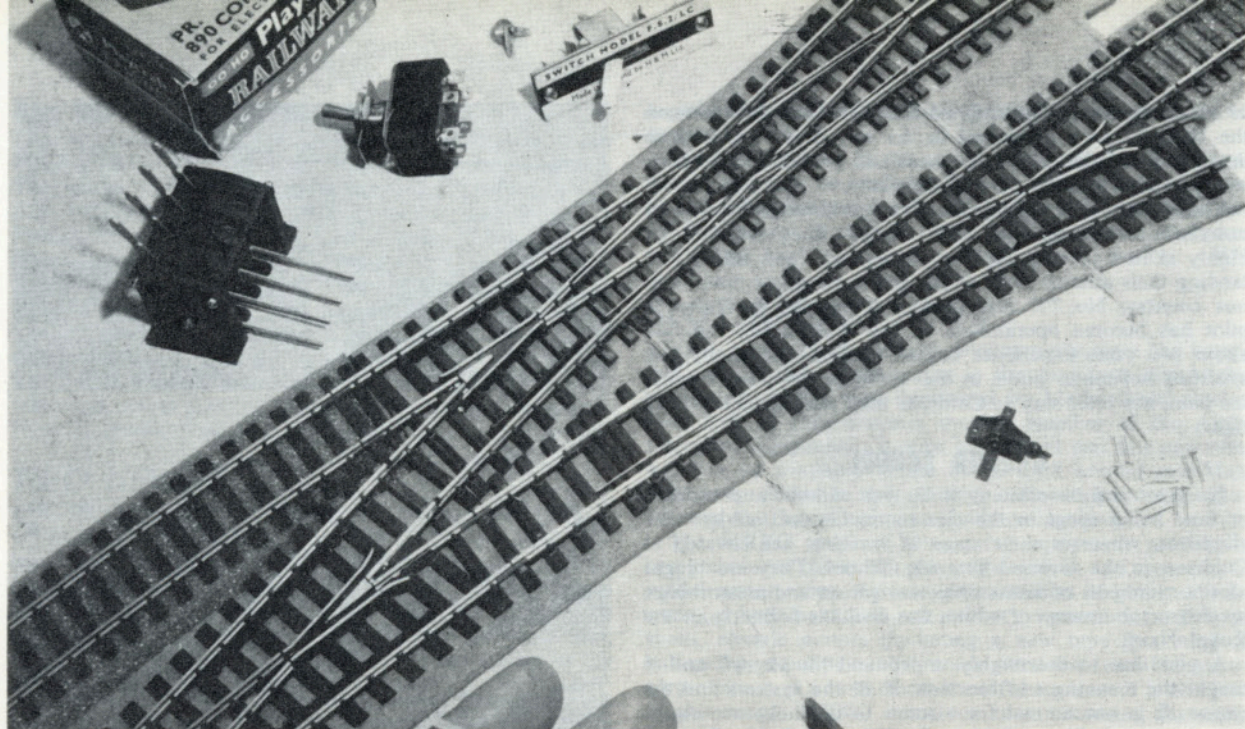
Although my stay at RNAS Culdrose was necessarily brief I was able to gain at first hand an idea of how intensive the training for helicopter pilots can be. Flying takes place both during the day and at night and exercises are going on continuously.

The Navy's need for helicopter pilots to replace those who leave after their short service commissions is quite considerable. Although the need is great the standard is



The Culdrose collection (top to bottom): Hiller UH-12E, one of the nine aircraft used by 705 Squadron for ab-initio helicopter training. Another of 705's aircraft, Whirlwind XN 297. Rare bird nowadays is this Dragonfly, used by 706 Squadron for pilot conversion courses. One of four Wasps seen at Culdrose, this aircraft, XS 531, is used for training purposes and converting pilots on to type.

never lowered. Once a man has volunteered for helicopter operations he becomes a specialist, a specialist privileged to gain some of the most advanced knowledge of flying that can be made available. When one realises that the cost of one aircraft today can exceed the cost of a pre-war destroyer it is not surprising that the Navy spends so much time and care in training the young officers into whose care these aircraft are entrusted.



BASIC RAILWAY MODELLING—by Norman Simmons

Point control

Seventh of a regular bi-monthly series catering specially for newcomers to model railways

IN my last article in this series (March issue) I discussed standards and methods to be used when building platforms for the passenger station. Having decided on the length, position and number of platforms, it is almost certain—if the station is to be of any importance at all—that the track in the vicinity of the station is going to incorporate a crossover, loop line, bay platform or siding. My own double track station will have two points and a single slip at one end and another pair of points at the other—a total of six pairs of switch or point blades, for which some form of control is required. It is as well to consider this aspect before proceeding further with the station and before too much of the baseboard is obscured by track, platforms, buildings and scenic effects.

Points can be direct or remote controlled, manual or electrical, and each method has its advantages and uses. Direct manual control through a point lever is usually resorted to for sidings. It is the method invariably

used in full-size practice and is the system I prefer to follow in similar situations, especially when a point can be reached easily and is not obscured by other objects. Graham Farish point levers are particularly neat, work very well and are reasonably priced at 2s each. I prefer to fix them to the point blade tie bar with a small piece of 20 gauge wire before the point is laid. It is easier to clip the wire in place at this stage and it avoids damaging the delicate tie bars. When you are sure where the point is to be laid, cover the track bed with a liberal coating of glue, taking care to avoid putting glue where the point blade tie bar is to be. You'll really gum up the works if you don't! When all is ready, pin the point in position, sprinkle ballast on to the glue which now appears between the sleepers, and finally pin the point lever to the baseboard.

Remote control has its advantages on the main line where, of course, it resembles the full-size control of a signalman in his signal cabin. Whether

Installing wire and plastic tubing point control. Grooves are cut in the baseboard, into which the tubes are laid.

you use electrical or manual remote control depends largely on personal choice and the size of your pocket. Electric point motors cost a few shillings each but, on the other hand, if the majority of your points are conveniently grouped near the operating panel, the cost of manual control need not be very expensive. A point worth remembering when you are allocating the freehold of your baseboard is to ensure that you leave yourself a good position for your control panel.

The most common form of manual control is the wire and tube method. The point blades are connected to a lever frame by a stainless steel wire, running in brass or copper tubing. More recently, a form of plastic tubing has become available which quite considerably cuts the cost of this method of operation. Metal tubing costs approximately 9d per foot, whereas the plastic tubing now available is only 9d per yard. I am indebted to Cornard Model Co, Rosebank Estate, Great Cornard, Sudbury, Suffolk, who sent me a sample of their plastic tubing which I have used for part of my layout.

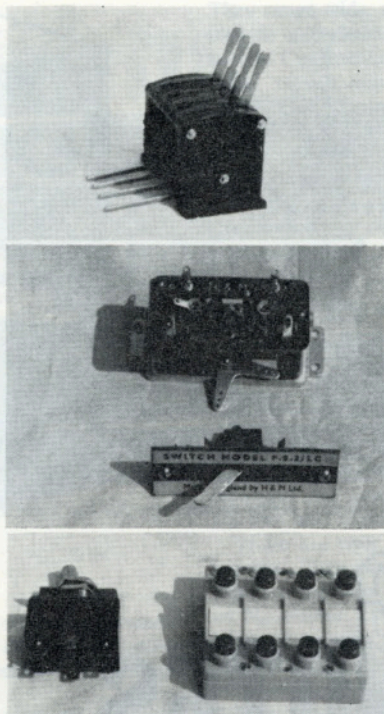
Its possible disadvantage is that it is, of course, much more flexible than the brass or copper tubing and needs holding down more frequently. Special 'Twinpin' staples are available from the same firm, price 6d per dozen, and they

do their job very well. I find in practice that they should be placed at roughly 9 inch intervals on straight runs and 3 to 4 inches apart on curves. Another method of holding the tubing firmly in place is to cut a groove or trench in the baseboard surface, into which the tubing can be laid and suitably covered over. Whatever form of tubing you use and however you fix it, you'll be glad you haven't fixed all your track and platforms in place when you come to do the job.

For manual control you need a point lever frame. A model lever frame with six or more levers can look very impressive and just like the real thing on a full-size signal cabin. Hamblings 'Addalever' frame is deservedly popular and works very well. I have had one in use for nearly 20 years! The 'Addalever' frame has just been brought up to date and now features black plastic segments in place of the cast white-metal ones used previously. A four-lever frame costs 7s and other sizes, such as six or eight levers, cost 9s and 11s 3d. The point control wire is simply soldered to strips of brass which are pivoted at the base of each lever.

When installing your remote control wire and tubing, or any form of point control come to that, great care should be taken to ensure that the throw of the lever and consequent movement of the wire does not greatly exceed the throw of the point blades, otherwise the comparatively weak tie bars can be damaged. One method of taking up excess movement is to incorporate small U-shaped bends in the wiring where the wire is connected to the lever frame.

Wire and tubing can be curved through 90-degree angles if required without setting up too much friction. Over short distances, radii as short as 1-2 inches can sometimes be used, but always aim at curving your tubing through as gentle an arc as possible, and ensure that the tube starts and finishes in a straight line with the movement of the tie bar and lever. The wire should be inserted in the tubing before you start bending it to shape. Where space will not allow you to use a wide sweeping curve, changes in direction can best be dealt with by means of angle cranks. These are also useful to connect two pairs of point blades to one lever, eg in a crossover, when it is always necessary for a pair of points to change direction at the same time. With a crossover, the cranks should be arranged so that the point blades move in opposite directions, whereas with a single slip the two point



Above, top to bottom: The latest plastic 'Addalever' frame; H & M point motor and switch and a single-pole, double-throw switch; and the Playcraft point control switch P890.

blades must both move in the same direction.

Five or six feet is about the maximum comfortable distance over which to operate points manually. Beyond this you should consider electric point motors. There are several types on the market, and one of the most popular is the H & M SM3, which costs 9s 6d. Each motor incorporates two electro magnets or solenoids which, when energised, move the point blades back

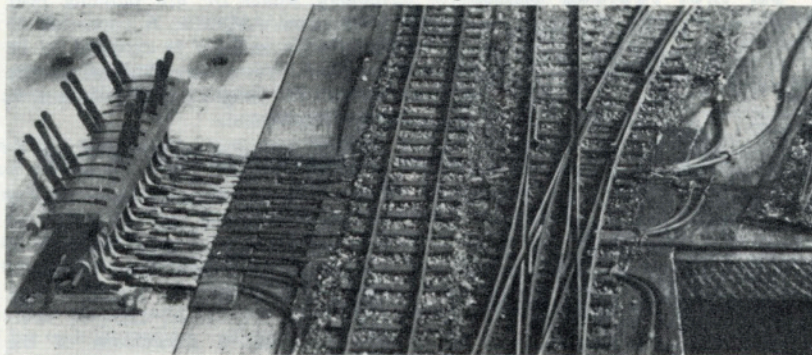
and forth. The H & M point motor can be operated by the H & M FS2/LC passing contact switch or, because it incorporates its own passing contact mechanism in the motor, it can be wired off a single pole double throw switch. Playcraft Railways sell a bank of press button switches which are ideal for operating electric point motors, and are very reasonably priced. Each bank of switches operates four points and costs only 7s 6d. There are two press buttons for each point—one moves the point blades in one direction and the other returns the blades to their former position.

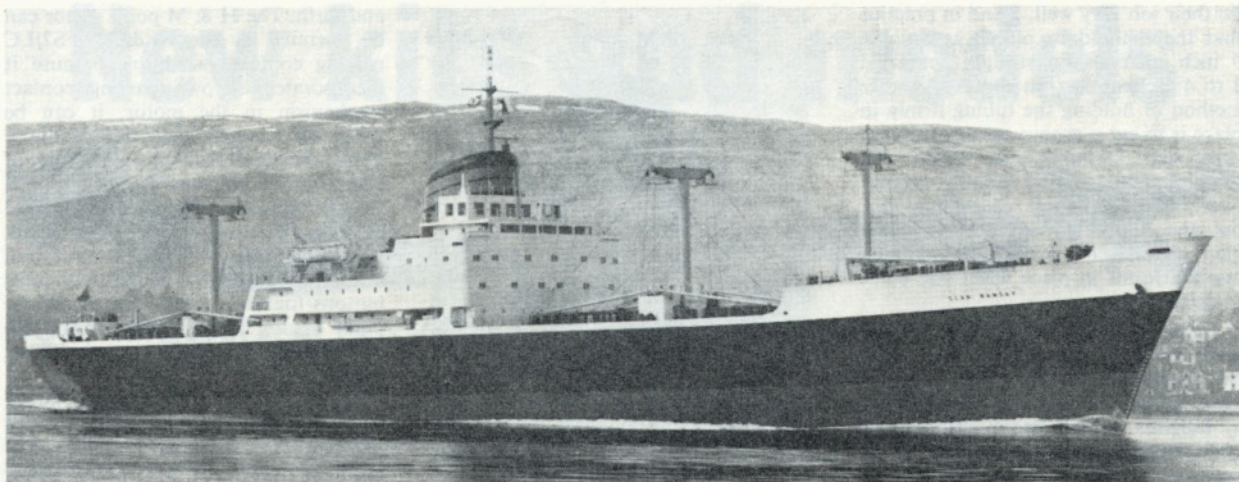
To wire up an H & M point motor to a Playcraft switch you need to take one lead off a 14 volt AC transformer to terminal 3 on the H & M point motor. The other lead should be plugged into the socket at one end of Playcraft switch P890. Terminal 6 of the point motor should then be connected to terminal 4, and likewise terminal 7 should be joined to terminal 5 (all terminals are clearly numbered on the H & M motor). Finally, terminals 1 and 2 should be connected to each of the two terminals opposite each pair of press buttons on the controller.

H & M point motors are designed to operate either above or below the baseboard and, with the angle crank supplied, offer two directions of movement. Unfortunately, with sprung point blades, as in Graham Farish Formoway, they are not powerful enough to operate more than one pair of point blades at a time, and a crossover or single slip each need two point motors for successful operation. The second arm of the angle crank can, however, be used to operate a semaphore signal, where there is little resistance to overcome.

You'll be glad you left the deck of your baseboard clear before you tackled all this. Perhaps we will be able to move on from here in the next article

Earlier Hamblings 'Addalever' frame, and a complex wire and tube manual installation.





The CLAN RAMSAY, first of a new class of refrigerated cargo motorships for the Clan Line, built by the Greenock Dockyard Co Ltd.

SHIPPING

NOTES

by A. J. Day

THERE hasn't been much doubt about the main topic of interest in the shipbuilding world during the past few weeks. Giant tankers have been making news. The first 100,000 ton dw tanker to be built in Europe was launched at Barrow in March; during the very same week Shell International Marine announced that they had placed orders for four crude carriers of about 165,000 tons dw each—three to be built in Japan and a fourth in Germany; and, a few weeks earlier, the biggest tanker ever to have been completed in the United Kingdom was delivered by Harland and Wolff Ltd, to Texaco Panama Inc, New York.

Our first 100,000 tonner

THE first 100,000-ton tanker to be built in Europe was named by HM the Queen and launched from the Barrow yard of Vickers-Armstrongs (Shipbuilders) Ltd, a ceremony which also commemorated the 50th anniversary of the British Petroleum Co Ltd. The tanker is for the BP Tanker Co Ltd. Her main engines were installed and much of the fitting-out completed on the slipway, so that by the end of this month (May) the *British Admiral*, as she was named, should be ready for service.

She is 917 ft 6 in long oa, 875 ft bp,

128 ft broad, 66 ft deep, has a gross tonnage of about 63,000, a draught of 49 ft and is to be propelled by single-screw, double-reduction-gear steam turbines of Pametrada design, manufactured by Vickers-Armstrongs (Engineers) Ltd, and capable of developing 25,000 shp at 105 propeller rpm. Her service speed will be 15 knots.

The maiden voyage of the *British Admiral* will be to Banias and she will return either to Milford Haven or Finnart, Loch Long. She will continue on this run but may also be used for the Persian Gulf (Kuwait), sailing 30,000 tons light through the Suez Canal and topping up at Banias. The ship may also go through the Persian Gulf to a new refinery which BP are building near Melbourne, Australia. A sister-ship to the *British Admiral* is expected to be launched from the yard of Swan, Hunter and Wigham Richardson Ltd, next October.

Four largest ships on order

THE Shell International Marine 165,000-tonners are, of course, the four largest ships on order anywhere in the world. Their dimensions will be of the following nature: length, about 1,050 ft; beam, 155 ft; draught, 54 ft. The comparative dimensions of the

Queen Elizabeth are: length, 1,031 ft; beam, 118 ft; and draught, 39 ft 6½ in. These tankers are due for delivery in the last quarter of 1967 and will be used to carry crude oil from the Middle East to Europoort (Rotterdam) and Le Havre via the Cape, returning in ballast via the Suez Canal. The ships will be propelled by 25,000 hp steam turbines that will give them a loaded service speed of some 15½ knots.

The 'Texaco Maracaibo'

THE largest tanker yet completed in the United Kingdom is the *Texaco Maracaibo*, built for Texaco Panama Inc, New York, by Harland and Wolff Ltd, Belfast. She is of 91,000 tons dw and is being used in world-wide crude oil trades based on Middle East loading ports. The *Texaco Maracaibo* is of the three-island type with a curved raked stem and a cruiser stern. She has a length oa of 854 ft 6 in, a moulded breadth of 125 ft, and a moulded depth of 63 ft 3 in. The hull is divided by longitudinal and transverse bulkheads into 17 tanks; two of these are for water ballast, while the remainder have a liquid cargo capacity of more than 710,500 barrels, and are arranged so that four grades of oil may be carried at any one time.

An unusual feature of the ship is an underdeck tunnel, built in lieu of the conventional fore and aft walkway, which affords protected passage between the midship and after houses. A great deal of piping which is ordinarily exposed has been placed in this tunnel. The propelling machinery of the *Texaco Maracaibo* is of Pametrada standard frame type PSF/D/M30 and has a

maximum of 27,500 shp giving an average speed of $16\frac{1}{2}$ knots. The turbines can be operated from the bridge by moving the telegraph lever to the required position on a graduated scale showing normal ahead and astern movements and percentages of propeller revolutions.

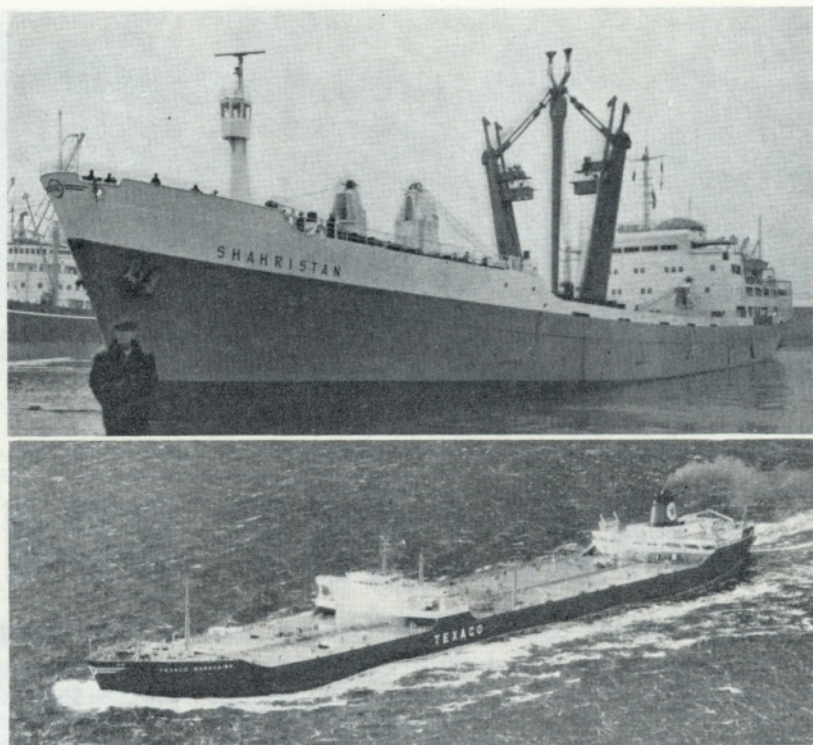
Clan Line's new class

FIRST of a series of four vessels which will constitute a new class of Clan Line ships was handed over in March and went on her maiden voyage from the Clyde to the Cape. She is the *Clan Ramsay* (11,500 tons dw), built for the British and Commonwealth Shipping Co Ltd, London, by the Greenock Dockyard Co Ltd, Greenock. She is a refrigerated cargo motorship of the closed shelter-deck type with a length oa of 529 ft 4 in, a moulded breadth of 68 ft 6 in and a moulded depth to upper deck of 43 ft $1\frac{1}{2}$ in. All the cargo spaces, except for the forecastle 'tween deck, are insulated and refrigerated. They are suitable for the carriage of packed citrus and deciduous fruits at a minimum temperature of 28 deg Fahr and, in addition, in sub-divided spaces in nos four and five 'tween decks the temperature can be reduced to minus 10 deg Fahr to make these spaces capable of carrying meat.

Propelling machinery in the *Clan Ramsay* consists of a seven-cylinder, poppet valve, B and W engine, type 7-74-Vt2BF-160, supplied by John G. Kincaid and Co Ltd, Greenock, which has a bore of 740 mm and a stroke of 1,600 mm. It develops 10,350 bhp at 115 rpm on maximum continuous service and gives the ship a speed of $17\frac{1}{2}$ knots.

Second ocean survey ship

HMS *Hecate*, second to be launched of the three deep ocean survey ships under construction for the Royal Navy, was put into the water at the Scotstoun, Glasgow, yard of Yarrow and Co Ltd, on the last day of March. The ceremony was carried out by Lady Yarrow. The ships, which are intended for a combined oceanographical and hydrographical role, were ordered from Yarrow and Co Ltd, in February last year. The first ship, HMS *Hecla*, was launched in December by the Blythwood Shipbuilding Co Ltd, Scotstoun, who are collaborating in work on two of the hulls. The *Hecate* and her sister-ships have an overall length of 260 ft, a beam measurement of 49 ft and a draught of 15 ft. They will have a displacement of 2,800 tons and be



Top: A ship with an unconventional silhouette because of her extensive cargo handling gear; the Strick Line's latest acquisition SHAHRISTAN (12,070 tons dw). **Above:** The largest tanker yet completed in Europe—the TEXACO MARACAIBO (91,000 tons dw) built by Harland and Wolff Ltd, Belfast, for Texaco Panama Inc, New York.

capable of 14 knots with a range of 12,000 miles.

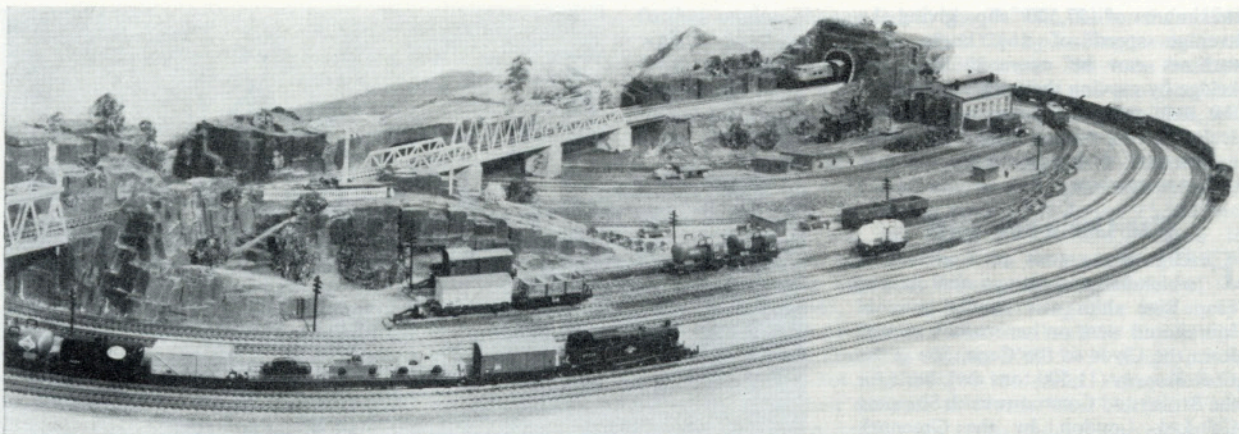
The four coastal minesweepers and two seaward defence vessels of the Royal Navy brought out of reserve to strengthen defensive patrols around Malaya have been commissioned at Singapore. They form the new 11th Minesweeping Squadron and have begun operations by assisting other Malaysian, Australian and British patrols in combating Indonesian infiltration in West Malaysia. The ships are HMS *Picton*, HMS *Invermoriston*, HMS *Thankerton*, HMS *Lullington*, HMS *Greatford* and HMS *Tilford*. They are manned by ratings flown out to the Far East from the United Kingdom.

HMS *Albion* sailed from Portsmouth in March for her second foreign service commission as a Commando Ship, and is expected to join HMS *Bulwark* on the Far East Station. HMS *Albion's* task will be to embark a Royal Marine Commando, or infantry battalion, whenever required and to transport it to any trouble spot. The ship's helicopters could be used to launch an assault, with all the advantages of speed, mobility and surprise. HMS *Albion* can also provide much-needed

assistance in the event of earthquakes, floods and other civil disasters.

Unconventional design

A SHIP of unusual silhouette because of her unconventional design is the new Strick Line vessel *Shahristan* (12,070 tons dw), built by John Readhead and Sons, Ltd, South Shields, for the Line's service from Liverpool to the Persian Gulf. The *Shahristan* is a closed shelter-deck vessel with a raised poop and forecastle, raked stem and cruiser stern. She has her machinery three-quarters aft and her principal dimensions are: length oa, 503 ft 3 in; moulded breadth, 67 ft 6 in; and moulded depth to upper deck, 39 ft. The ship has large clear holds and a most comprehensive outfit of cargo-handling gear, comprising one Stulcken heavy-lift derrick of 180 tons capacity, four 10-ton derricks, and two seven-ton and three three-ton Clarke Chapman electric cranes. The main engine, which is arranged for remote control from the bridge, was supplied by Wm Doxford and Sons (Engineers) Ltd, Sunderland. On the fastest run over the measured mile in ballast condition, the *Shahristan* achieved a speed of $19\frac{1}{2}$ knots.



This 2 mm scale layout measures only 5 ft across, and gives an idea of what can be done in a small space. Track is Peco Streamline 000 gauge, rolling stock mainly by Arnold of Germany.

SMALLEST SCALE YET

Mike Bryant discusses N Gauge, a new development in railway modelling

I HAVEN'T room for a model railway!—how often I have heard this remark! Sometimes it is used merely as an excuse to stay in the armchair (where some people plan the most wonderful railways!), but very often it is an expression of a quite genuine feeling. How much room do you need before a worthwhile railway is possible in model form?

Developments in the last few years, however, have gone far to remove the excuse of lack of space. For very many years there has been an intense, if somewhat limited, interest in the really small scale of 2 mm to the foot—that is, only half the size of the ubiquitous OO—but until a few years ago lack of any form of commercial support meant that to model in this scale was very much a 'do-it-all-yourself' affair, which was a pretty daunting prospect if you weren't a competent modeller, or if you couldn't afford to buy professionally-made 'one-off' jobs.

My cousin, R. W. G. Bryant, was one of the post-war pioneers in this tiny scale, and many of you will remember the appearance of his Inversneckye layout at the Model Railway Club's Easter Exhibition in the early post-war years. This line was his answer to the cries of lack of space and lack of opportunity; at the time he built the line he was living in 'digs', and he solved both the space and the portability problems by putting his model railway in a banjo case! Some of you who have never seen this gem of scenic modelling may doubt this fact, but it dramatically demonstrated the possibilities of this scale.

So far I have emphasised the aspect of space-saving with this new scale, but this is only *one* way of looking at the situation—and probably the least important one at that. What the introduction of 2 mm scale commercially can also mean is more realistic layouts in the same space, that is, a greater air of spaciousness, nearer-to-prototype curves and track geometry, longer trains and the abandonment of the idea that a mainline express consists of a Pacific and three coaches, and a freight train of a loco and six wagons!

The commercial break-through in this scale came about 1960 when Lone Star, who had marketed a range of 2 mm scale die-cast push-along toys, decided to take the plunge and produce working electric versions of their range at really competitive prices. The difficult part of the exercise in making

2 mm models work is, of course, the provision of motive power, and Lone Star solved this problem by the somewhat revolutionary method of mounting the motor centrally and driving all wheels with rubber bands from an extended armature shaft. This limits the choice of prototype to the oblong, box-like bodies of diesels or electrics, and the massive outlines of some transatlantic tenders.

Other disadvantages of this method of propulsion are some loss of power on curves and a tendency to have only two speeds—full stop or flat out. Its main advantage is, of course, cheapness, and Lone Star locos sell at a very reasonable price. The whole range is aimed at the toy rather than the model market, and it is therefore not really fair to judge them by the highest technical standards. They have to be robust, they have to work, even in unfavourable conditions, and they have to be cheap, and on all these counts they score heavily.

About two years ago, the name of the Continental firm of Arnold began to be heard in this country and increasingly large supplies of their Rapido range are making their appearance here. These models are to a scale of 1:160 and run on 9 mm gauge track—a scale which is now known both on the Continent and here as N Gauge. These models are, of course, of Continental prototypes and are really beautifully detailed little jobs which are engineered to precision standards. Quite naturally this high standard puts them out of the mass-produced toy price bracket, but they work faultlessly and are, if anything, more powerful than their Continental HO counterparts, which is saying quite something. It would seem as though, for the first time in any scale, really long, true-to-life trains are possible.

To illustrate the standard of these tiny Arnold locos, let's look a little more closely at the diminutive 0-6-0 Tank which is shown in the photograph cradled in what looks like a gigantic hand! This little gem measures just over 2½ inches over its buffers and will haul between 20 and 30 four-wheel trucks quite happily—a train of something over four feet in length. It costs, at the moment with the import surcharge, £4 18s and is powered by a delightfully controllable motor which fits on to two pegs in the chassis and is held in place by a spring inside the body. The drive is taken through nylon and brass spur gears to a lay-

shaft and thence through worm and worm wheel to the front and back axles. The centre axle is unpowered and free to 'float', whilst current collection is from the four outer wheels. There is even room for a TV suppressor! The body is a one-piece metal casting which gives good weight for adhesion and a remarkable amount of detail. Even the buffers are correct, having one flat and one convex head as per Continental practice. The valve gear is simplified, but is effective and eminently practical in this tiny size.

The Arnold rolling stock is equally finely detailed; indeed, I believe the bodies are the finest examples of plastic moulding that I have ever seen. They are screwed to die-cast underframes which feature pinpoint axle bearings and sprung automatic couplings. The weight is therefore where it is needed, low down, and a single truck will start rolling by itself on a gradient of between 1 per cent and 2 per cent. This exceptional free-running contributes in no small measure to the remarkable hauling power of the locos.

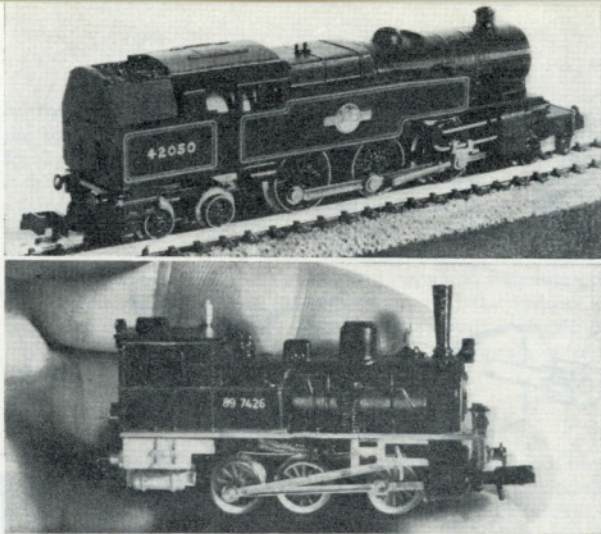
There is a good range of Continental and American motive power available already and fresh items have been added each year. Steam locos include the 0-6-0 Tank and a 2-6-4 Tank, with a 2-6-2 tender engine due this year, and there is also a selection of diesel and electric locos already in the range. Passenger and goods stock is already quite diverse, and further items this year will make the range almost lavish.

There are numerous lineside buildings and accessories available in this scale from Arnold and other Continental manufacturers. Many of the buildings are available in kit as well as made-up form. These kits are expensive, but first-class, requiring no painting at all and yet producing really realistic and authentic structures. Since I wrote this article, there have arrived catalogues showing very wide developments in N Gauge. This scale has undoubtedly 'caught on' on the Continent and we can expect supplies to improve phenomenally over the next year.

So much for the Continental supplies. What is the future of British N Gauge? Perhaps the most significant and useful contribution to the scene on this side of the Channel is the introduction by Peco of a first-class N Gauge track which will accept both Arnold and Lone Star stock. This is a scaled-down version of their already famous OO Streamline track, that is, it is nickel silver rail on a plastic base and is fully flexible. Also available from the same manufacturer is a matching foam ballast inlay strip, into which the track fits snugly, disguising its necessarily over-thick sleepers.

There is no doubt that these two items have removed nearly all the terrors of track laying in this tiny size. The last difficulty Peco should remove later this year when they bring out matching points. I understand these will be to the generous radius of three feet, which means they are following out their convictions that N Gauge is for greater realism and the closer-to-prototype look, and not merely as a space-saving scale. Coming soon, too, will be kits for rail-built buffer stops, and a superstructure kit in die-cast metal for a BR Fairburn 2-6-4

Later this year, Peco will be producing the first BR-type body kits to fit Arnold wagon chassis. One kit makes two versions—either a hopper wagon or a grain wagon, the other is for the BR-type standard brake van.



Top: Only $4\frac{1}{2}$ inches long, this 2-6-4 Peco Fairburn Tank can pull 30 wagons. **Above:** Diminutive but detailed, the Arnold 0-6-0 Tank is only just over 2 inches long.

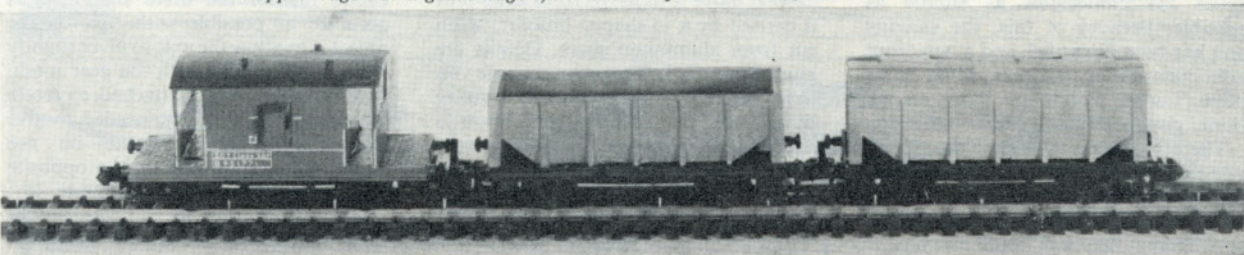
Tank. This will fit on the Arnold 2-6-4 Tank chassis. The kit is simplicity itself to assemble; it merely needs a dozen parts gluing together. I have enjoyed making up a pre-release sample and cannot imagine anyone finding it difficult. Peco will also be catering later for scenic backgrounds in this scale.

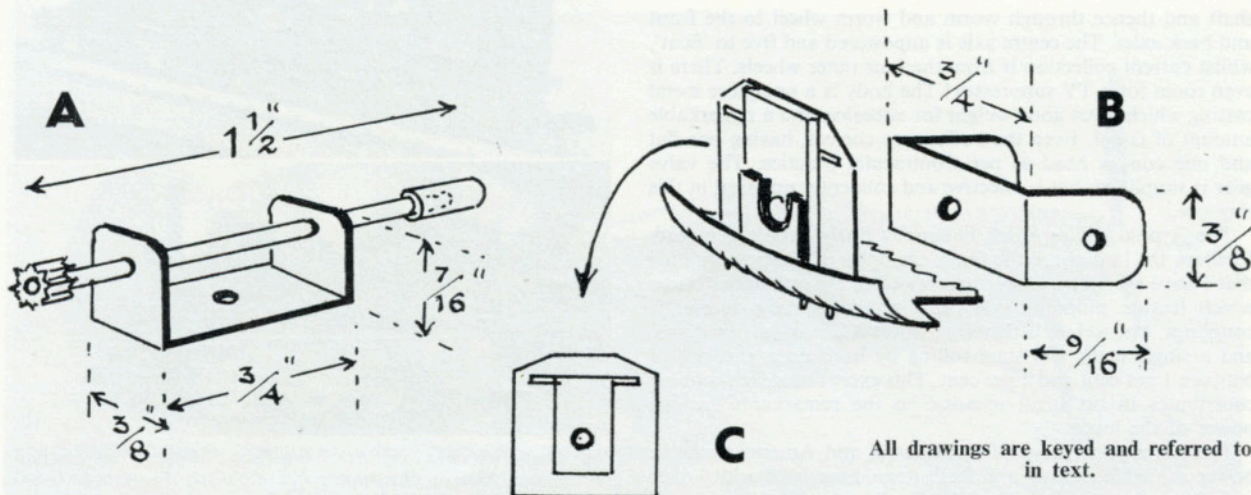
There is no doubt at all in my mind that N Gauge in this country is not only here to stay but also to flourish. I already know of several British manufacturers who are preparing further items and yet more Continental firms are adding their share. Provided everybody is sensible and sticks to the same wheel and track standards, and some compromise is worked out over the coupling question, the future in this smallest-ever scale should be rosy indeed.

ON GLUES AND CEMENT

A rather compressed remark of mine in a recent article about balsa cement could be misconstrued. Obviously, balsa cement has been developed to glue balsa, and very effectively it does the job, too. However, beware of any temptation to strengthen a structure by adding a fillet of cement down the inside of a joint, or the quick-drying action of the cement may pull the joint out of true. The layer of cement on the two surfaces to be joined will be quite strong enough. The aeromodellers among us will know what I mean—the quickest way to get a camber on a balsa wing is to run two lines of balsa cement across its underside! However, the interesting correspondence which arose from my earlier article makes me realise how little the average person knows about all the different types of adhesive that are now on the market, and so I shall do some personal research and include my findings in a future article.

Copyright, Mike Bryant, 1965





All drawings are keyed and referred to in text.

Wheelspin

BY BERT LAMKIN

Building a compact hill-climb layout

BEARING in mind the experiments being carried out with four-wheel drive on present-day Grand Prix and sports-racing cars, I thought it might prove interesting to convert an Airfix slot car to this form of transmission.

The particular model chosen for this conversion was the Auto-Union, the larger-than-usual body and higher-seated driver providing most space for the 'works'. As I believe that a large number of my readers are table-top mechanics, without comprehensive engineering facilities, I have tried to make the conversion as simple as possible. Because of this, the steering unit has been discarded, and a new front axle, identical to the rear, fitted in its place. Larger wheels are fitted on the front, giving greater ground clearance.

The first stage is to remove the motor, axle assemblies and driver from the lower half of the body. A modelling knife is used to detach the driver and seat. With a little care, they will come away quite

cleanly. While using the knife, cut off the rear steering unit support.

Stage two entails fitting the front drive shaft. This is a $1\frac{1}{8}$ inch length of $\frac{3}{16}$ inch thick steel rod. It has a standard motor pinion (from a discarded motor) fitted at one end, while a short length of polythene tube, to act as a coupling, is fitted at the other. The shaft is carried by an aluminium bracket as shown in sketch A. This bracket is fitted centrally within the car body, its front registering with the projection that located the driver's seat. It is secured with a 10 BA bolt. You should at this point make sure that the drive shaft is directly in line with the motor shaft.

Front axle layout

Next move is to fit the front axle. This is carried by a U-shaped bracket, again cut from aluminium sheet. Details are given in sketch B. To mount the axle you have to remove the wheels, bearing blocks and the contrate gear. Care is needed to ensure that the wheels are a firm fit when replaced on the axle. Now thread the axle through one side of the bracket and refit the contrate gear. Light taps with a small hammer will get the

gear back into its original position. Small spacers about $\frac{1}{16}$ inch wide are placed over the projecting ends of the axle before the wheels are refitted. When finally assembled, the gear will be located to register with the front pinion. You must ensure that the axle is square in the bracket so that one wheel is not placed slightly ahead of the other.

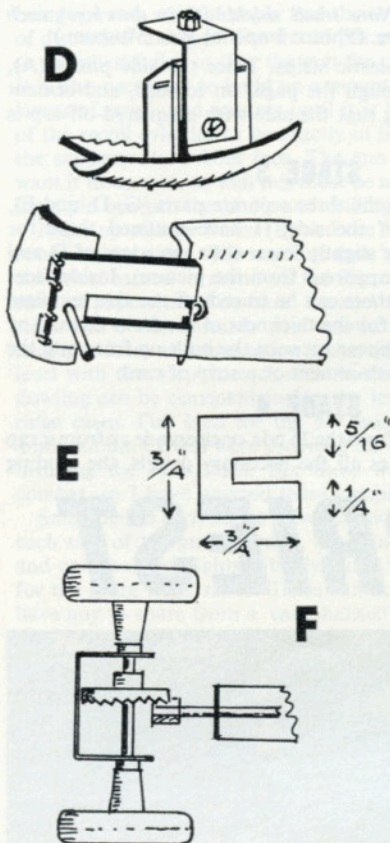
The front axle assembly mounting is made from small pieces of plastic scrap and card. The plastic is $\frac{1}{2} \times \frac{1}{8} \times \frac{1}{16}$ inch. The card measures $\frac{3}{4} \times \frac{1}{8}$ inch. They are cemented together to begin with and then the completed mounting is cemented to what was originally the front steering unit support lug. Sketch C illustrates the general layout. A spot of cement at the lower corners will add rigidity.

Clearance for drive

While the cement is hardening, deal with the upper body half. Cut away the three small pillars behind the radiator grille and trim the two in front of the steering wheel. This will give the necessary clearance for the new drive.

When the fabricated mounting for the axle bracket is quite secure, drill a 10 BA size hole through to register with the centre line of the drive shaft. Be as accurate as possible with this, as the object is to allow the axle to pivot slightly without interfering with the gear mesh. Before the axle unit is attached, a certain amount of filing will be needed to give clearance for the contrate—do not forget that this will be on the opposite side to the rear-mounted contrate.

Also at this stage we can consider the front body fixing. There are two ways of



achieving this. You can drill a hole through the grille for the pivot bolt to project through and use an additional nut, or another way is to use a small aluminium angle, with a 10 BA nut soldered on to its upper face. This angle is secured by the axle bolt and another 10 BA bolt replaces the radiator cap, screwing through into the soldered-on nut. See sketch D for details.

With the front axle now in position (see sketch F), check that both spindles are running free; friction here will cause a considerable loss of performance.

The new guide pin can now be fitted. This may be made from either plastic rod, or an odd 10 BA bolt. It is mounted on a small plate cemented to the underside of the body, and located by the small projections on either side of the pick-up slots, see sketch E. This plate also strengthens the front end.

The original pick-up braids will not be long enough with this new front end, and will need extending with some flex. In my prototype, the braids were threaded through the two slots, bent over to the front of the axle mounting and cut. The small clips that connect the

braids to the motor were then resoldered to each length of flex (the flex being soldered in turn to the braids themselves).

Now the car can be reassembled for a trial run. If this proves satisfactory, a certain amount of 'decoration' can be done and the driver refitted. The yellow of the plastic is not quite the Auto-Union's racing colour, silver or white being more appropriate, with matt black for the interior. Various details such as the steering wheel rim, tops of the exhaust stubs and so on can also be painted matt black, while the windscreen frame and wheel rims are silver. The new chromed wheels would improve appearance enormously.

Driver equipment

The driver can now be dealt with. The front of the seat will need filing down to clear the transmission. In the days of these hairy monsters, the drivers invariably wore white overalls and a linen or leather helmet, the 'crash hat' as we know it today was a rarity. Some of the aces sported bright yellow or red

headgear and goggles were definitely the thing—the Airfix driver is quite authentic in his dress so a few minutes with paint and brush will add life to him. When the paint is dry, the driver and his cut-down seat may be replaced in the car.

Two-motor design

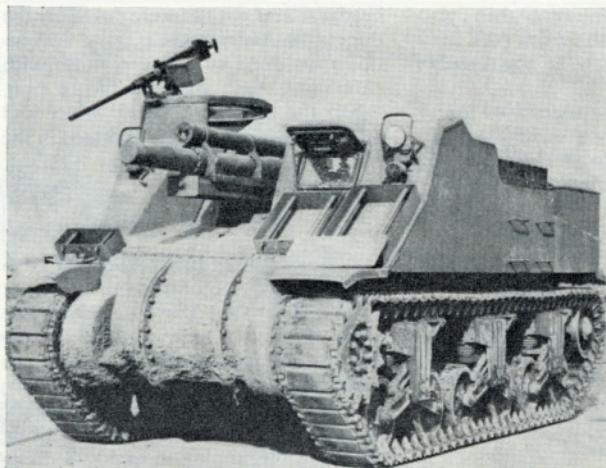
A variation on this conversion is to use a second motor driving the front wheels. The front axle assembly is the same, the extra motor occupying the driver's position and held in place by an aluminium strip as shown in previous articles. The two motors are electrically connected in parallel. Do not forget that they will be running in opposite directions. The driver will need quite a bit of modification and will be mounted on a piece of plastic card cemented into the cockpit.

Both versions should prove interesting, depending on the circuit used. As I have mentioned previously, miniature cars respond to tuning as much as full-scale ones, although in the case of models it is a much simpler operation.

GRAHAM HILL GETS IN THE GROOVE



Several leading racing drivers take a keen interest in the Springfield Boys' Club, in London, E5, and it has become known as 'Motor Racing's Own Boys' Club'. Recently the Club installed a new four-lane slot racing circuit, supplied by Airfix Products Ltd. Built by the boys themselves, under the supervision of Bert Lamkin—who writes regularly on slot racing in AIRFIX MAGAZINE—the circuit was formally opened by Graham Hill just before Easter. Graham Hill said that he finds slot racing demands every bit as much skill as racing in real life, the most important factor being concentration. Miniature racing is, he told the boys, valuable training for those whose ambition is to become racing drivers. To everyone's amusement, Graham then spun off on his opening lap in a Porsche! The picture shows four racing drivers—left to right, Charles Lucas, Graham Hill, Peter Gethin and Les Leston—taking part in one of the opening events on the new circuit.



Left: Full-size Priest. Note small shields (G in drawings) each side of the howitzer. (Photo: Imperial War Museum.)

in place between the plastic strips. Trace the side pieces (A), or prick the shape through the page, on to card, and cement them in place, ensuring that the side with a squared-off top is on the right.

STAGE 3

Build up the front in the three separate parts (G, D, and E), following the angles of the side, (I have outlined these for clarity, but E should be slightly lower than the edges of D and C, a point not readily apparent from the picture). Inside faces are also required, and these can be traced off the side template (A), making allowance for the thickness of the front faces. Any small gap which may appear between the built-up front and the lower hull is filled in with cement or a strip of card.

STAGE 4

The gun is converted from the 25 pdr, or else made up from scrap plastic. Diagram F gives all the necessary details, the binding

BUILDING A PRIEST

Military modelling

by C. O. ELLIS

Howitzer from the Airfix Sherman kit

'BLOODED' at Alamein with the 8th Army, the M7 105 mm howitzer motor carriage (known in Britain as the Priest) was the standard mobile field artillery weapon of the Allied armies for the latter half of World War 2, giving useful service with the British until 1944 and with the US Army until post-war days. It makes an attractive model, and is an equally useful item of equipment for miniature armies.

STAGE 1

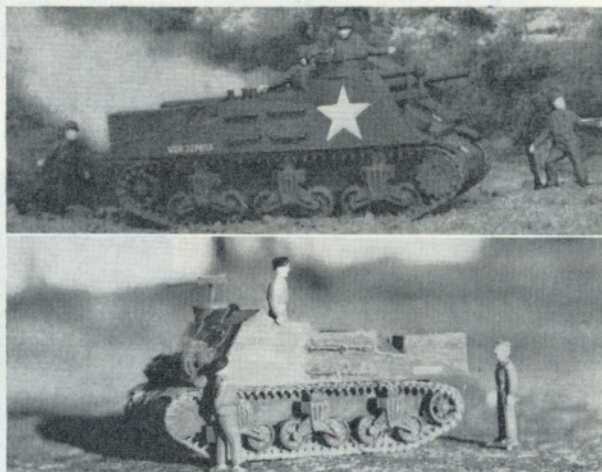
Two versions of the Priest were produced, first on the M3 (Grant) chassis and, later, on the M4 (Sherman) chassis. There was actually a difference of a few inches in overall length between these two, but this is so small in this scale that it can be virtually disregarded. We cannot overlook the difference in appearance, however, so if you favour the Grant-based M7 (essential for Alamein), it is necessary to build the Sherman chassis with the return rollers mounted immediately above the suspension bracket, as seen in the picture. This means cutting away the moulded bracket from the rollers, and then plugging all the unused locating holes in the chassis sides. For the M4-based Priest, of course, you can disregard this modification.

Only the ends of the hull are required, so the centre section is sawn away before assembly. Strips are then cut from the discarded hull section and cemented along the exposed side edges above the track.

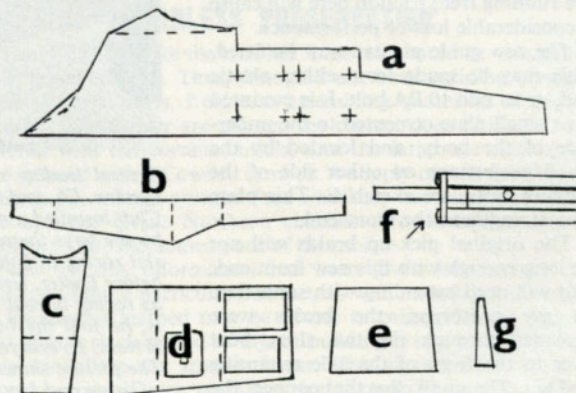
STAGE 2

Cut a rear bulkhead (33 mm x 9 mm) from card or styrene sheet. A floor (42 mm x 31 mm) is also required and is cemented

Right: All templates full-size. References in text. Driver's visor is shown on part D, together with the spare track brackets. Dotted line on part A shows the differing outline of the right-hand side.



Top, above: A miniature M7 goes into action amongst a swirl of dust and smoke. Crew are easily adapted from Airfix figures. Above: The Priest Kangaroo in model form. Note the plated-in gun embrasure with the top flap at different angle to its neighbour.



being a 1 mm strip of paper and the top recoil cylinder a piece of discarded tank gun. Cut the 25 pdr cradles right back almost to the pivot holes so that the gun fits close up to the aperture. It is also necessary to build up a mounting for the cradle, using layers of small card squares until it is high enough for the top of the recoil cylinder to be exactly in line with the top edge of the superstructure front face. The gun will elevate, but if you want it to traverse as well this must be accomplished by cementing a pin beneath the cradle and drilling a hole in the floor.

Make up storage boxes (B) and use 'Bambi' staples for hand rungs on the sides. The machine-gun 'pulpit' (X)—from which the Priest earned its name—is the Sherman cupola with a 3 mm strip of paper round its base. Parallel with the rear half of the sides and 5 mm inwards goes another strip of card of equal height to form an ammunition locker. This requires a front end, level with the 'step' in each side. Pieces of 'stretched' sprue or dowling can be cemented inside the lockers to represent cartridge cases. Full load for the M7 was 69 rounds of 105 mm ammunition. Covers were provided for the ammunition lockers, bringing the sides flush. But these were usually removed in combat, so I have omitted them completely.

Small details include the driver's vision port, small shields (G) each side of the gun aperture, the mudguards (6 mm x 5 mm) and optional headlights. Finally, add the brackets on the front for the spare track shoes. These can actually hold track if you have any to spare from a 'cannibalised' kit.

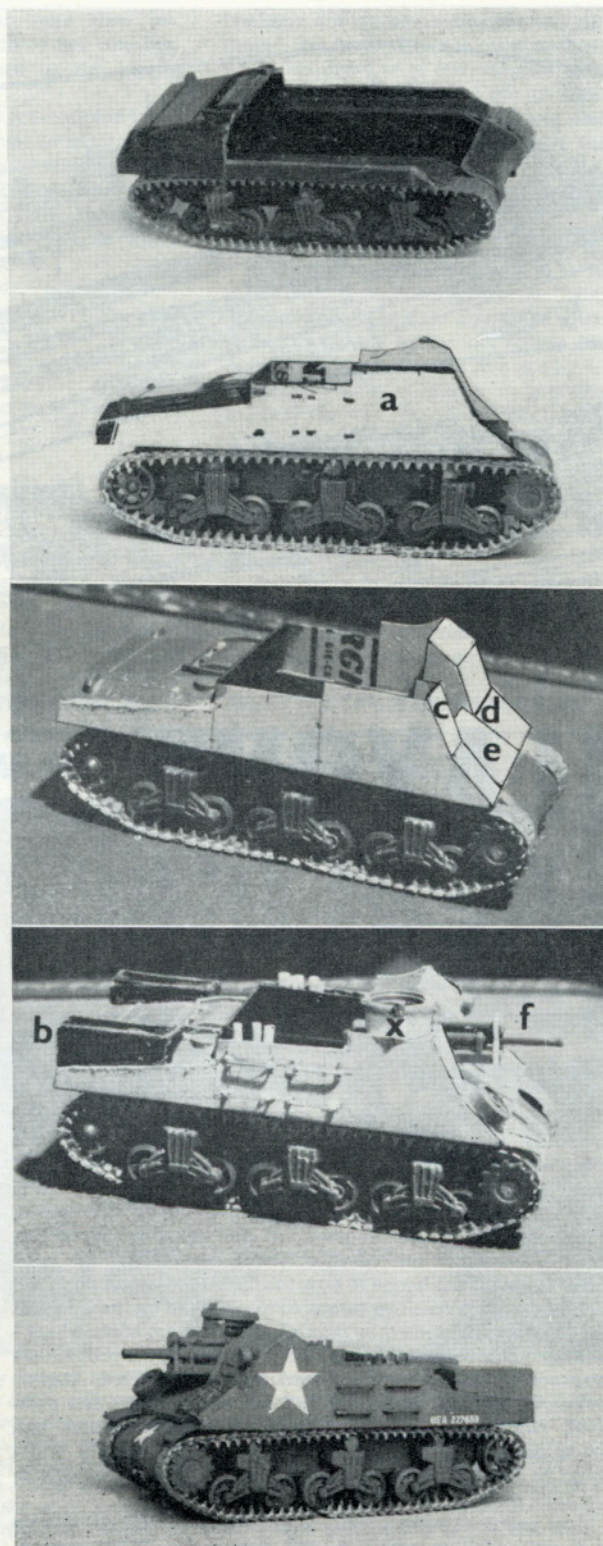
STAGE 5

After cleaning up, the model is ready for painting. The standard US Army finish was olive drab—obtained by mixing a little Humbrol olive green into dark earth—with the familiar white stars prominently displayed. These can be obtained quite easily in various sizes by cutting the stars from spare US aircraft transfers. One M7 carried the name 'Champagne' in nine inch white letters with a small star above it. Others had larger stars. For the serial number, I found that the 'Hindustan' transfer from the Carrier kit would usefully yield the 'USA' lettering. British Priests in the desert in late 1942 were painted in the usual 'sand' and very dark grey (almost black), this latter colour being applied usually in an irregular wavy patch horizontally along the lower sides, with odd patches elsewhere. A Priest of the 11th (HAC) Regt, RA—the first unit so equipped—was numbered S 169299 and had the letter E on each side inside a blue triangle. On the lower hull front (left) it had the 1st Armoured Division sign—a white rhino on a black oval—with the blue/red RA flash to the right.

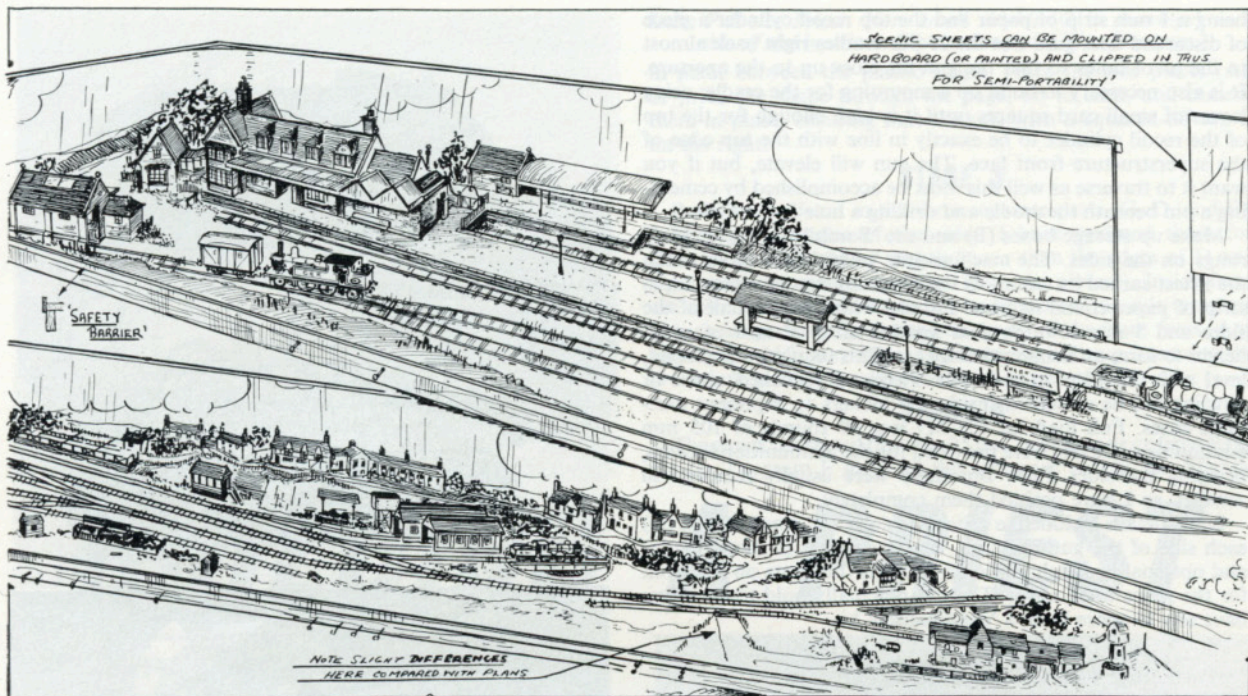
KANGAROOS

Priests were among the first vehicles to land at Normandy, equipping field regiments supporting the assault divisions. In fact, they actually commenced firing from the LCTs during the run-in and thereafter gave valuable assistance to the infantry on the beaches. Shortly after D-Day, however, all Priests were withdrawn from British regiments in order to rationalise ammunition supply, while 25 pdrs or Sexton sp 25 pdrs took their place.

The withdrawn vehicles had a completely new lease of life as troop carriers with the APC regiments of 79th Armoured Division, in which role they were known as Priest Kangaroos. With the gun removed and the position plated in, they carried a section of infantry with relative immunity from small-arms fire. In model form a piece of card shaped to close the front can be cemented across the gun aperture. A Browning .5 AA machine gun was usually mounted on the 'pulpit' and this can be provided from the new Airfix Buffalo kit.



Numbers on pictures refer to stage-by-stage description in the text.



LAYOUT REALISM

by Alex Bowie

Picturesque planning

QUITE a number of readers are aware that I am modelling a so-called 'Cowbell' line, and are wondering how it is progressing. Frankly, until recently, it wasn't progressing very much, because, in common with many other modellers, I can't always ignore necessary domestic chores. As these consisted of practically pulling our house apart and putting it together again, I have been limited to table-top modelling.

But work on the house is now finished, with a few parts left over, and a few weeks ago extensive work began on the Cowbell. The buildings illustrated in the October issue are some which I have been able to make during odd moments. Some people may have noticed that they are based on familiar East Anglian landmarks, both of which are featured on calendars and post-cards. Normally I prefer to devise my own structures but, having decided on East Anglia as a prototype, thought that I would be able to get the feel of the locality by copying one or two of its most typical buildings.

Most people at some time or other are compelled to slow up on their modelling activities, and this is the danger period. Fortunately my research into East Anglia kept the railway modelling bug well alive, even though production had slowed.

The 'Cowbell' line follows roughly the layout shown in the main sketches, but there are bound to be slight changes of mind as work progresses.

For this reason, I recommend that other people, forced by a tyrannical household to do a bit of plumbing, cementing, or homework, will find that a few spare hours spent on research of some sort or another will keep the interest in modelling alive. The occasional model on the table-top will clinch the matter. There is time, incidentally, to assemble the two-bob Airfix wagons with extra care, for that real photographic accuracy.

But back to the 'Cowbell' line, which seems to have caught the imaginations of some modellers. It is, frankly, a hybrid, for the simple reason that I do not look forward to years of modelling an exact copy of East Anglia's old Great Eastern Railway. Thus, by modelling those things I have time for, and mixing them with various mass-produced components, the result will give me some of the dynamic Victorian atmosphere, without irrevocably committing me to a life's work. I'll explain how this will be possible—though the name 'Cowbell' might give the clue.

PAINLESS PRESERVATION

The 'Cowbell', like the true-life 'Bluebell', could be visualised as a preserved line. Thus, though I am busy building vintage Great Eastern locos, I am also assembling quantities of Airfix wagons. The former are painted the correct deep blue and are lettered with the correct initials, and the latter are slate grey and lettered with a Cowbell symbol. A supply of teak coaches is coming up, mostly antique four-wheelers, but there will be a few old-type Great Northern coaches thrown in, because I happen to like the domed ends of the roofs.

Now all this information has been given in response to requests about a particular line but, as with most layouts, some of the lessons learned may be of use to others. I have stated that after a slack period of layout building it is a good thing to keep modelling the smaller items. This is well-tried advice, common enough even years ago, but there is a second problem

involved. The longer one is away from layout building, the more opportunity there is for changing the mind. Thus, if a chap first begins to plan a period line, he may end up with plans for a 'modern image'. This would be no hardship, for I see a lot in common with the dynamic era of the diesel and the equally virile times of the Victorians. But it means that when the time comes to begin or resume work on the layout, the builder starts with a confused mind, and may dither continuously between one and the other. This is no exaggeration. I have seen it happen frequently, and think that the cure is to decide on a railway, then sort out all the facts and figures possible about that one only. The research will keep the mind pinned firmly on the one target.

The third problem is in keeping to a given plan once it has been decided. I'd say that it would be impossible to keep exactly to plan, but you could keep to the same theme.

THREE VERSIONS

This month I have sketched three layout plans of the 'Cowbell' line. Frequently I go into the pros and cons of various layout plans, on the basis that one man's meat is another's poison. But this being my personal layout, it will obviously reflect my own personal tastes. It is a scenic layout, but I regard the railway as just as much part of the scenery as anything else. Thus, buildings, railway, lineside, and back-scene should merge together as a single scene. If they don't, then in my opinion they do not follow the prototype.

Thus, I had a pretty fixed idea of the general overall effect I wanted, and for the given size of baseboard, no matter how many alterations I thought I had made, the layout always ended up looking much the same scenically.

You will see that the three plans, A, B, and C all have differences, yet each follows the fixed theme decided on. Note that the railway nestles against its background, is part of it, yet

is arranged so that the railway is not dominated by the rest of the scenery. I regard the main station building as being the focal point, the part which should attract most attention. Thus, it is not jumbled up with other buildings, but is grouped separately. I place the other railway buildings at strategic points so that they take charge of the rest of the layout, and on no account would I allow street buildings to overshadow those of the railway—except right at the end, which is well clear of the station yard. There is the suggestion that the railway is beginning to travel into the open country, and a couple of picturesque buildings partly hide it as it disappears into a disguised hole in the wall.

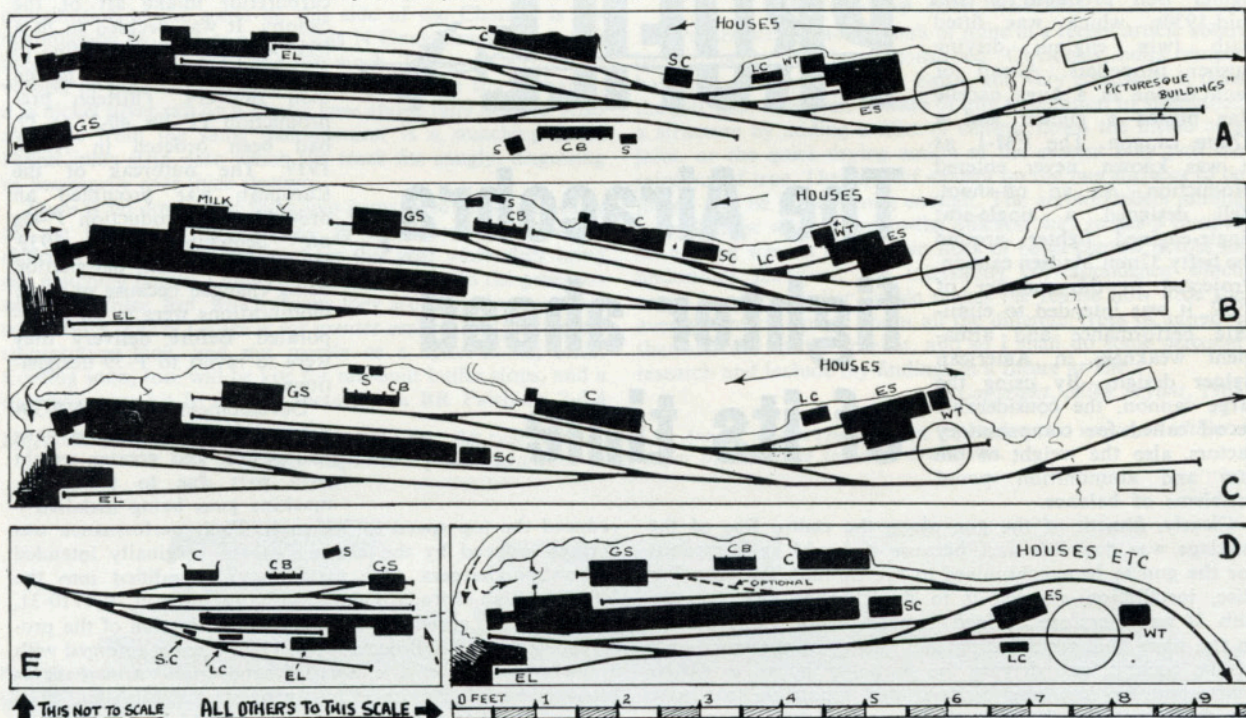
A SIMPLER LAYOUT

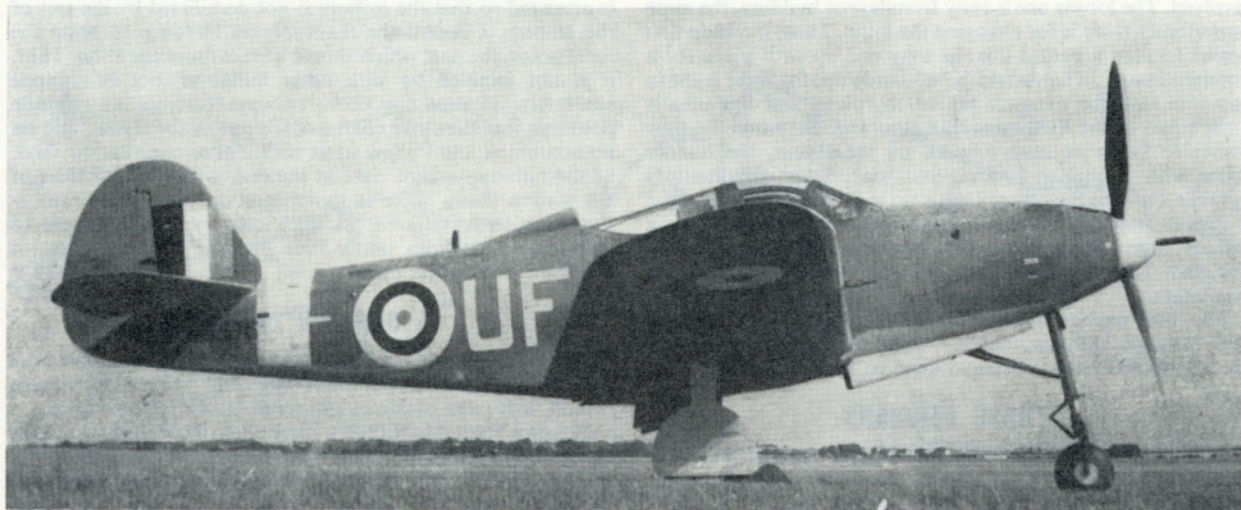
This is my personal layout, but in plan D I have shown how a smaller, simpler line can follow a similar theme. Where space is tight, half-relief buildings will supply realistic street scenes.

My own turntable will be a mere eight inches across, but in order to take the average proprietary locos I have cut the Airfix table in plan D only slightly. The shed and water tower will partly hide the curve, being positioned inside it, and thus will serve pretty much the same purpose as the two buildings on my own layout.

Plan E is for comparison. This is not to scale, but shows a fairly typical small town or country prototype on the Great Eastern. I have put this in for a reason. My own line, though purely a fanciful affair which does not exist in prototype, must have some source of inspiration. You will be puzzled, perhaps, for there seems to be little similarity between the 'Cowbell' and this Great Eastern plan. I build mainly to please my eye. But there must be a regard for the prototype, and the little plan that I have studied for months helps to keep one from becoming too fanciful, even though the final layout bears little resemblance to the prototype plan which supplies the germ of the idea.

Plans A, B and C show some of the likely alternatives but not the general similarity. D and E are described in the text.





AH576, a Bell P-400 Airacobra 1 of No 601 Squadron, at Duxford in the autumn of 1941.

It is now customary to situate the engine in fighter aircraft aft of the cockpit, leaving the nose free for armament, or associated equipment and nosewheel housing. One never hears the suggestion that this is a difficult or dangerous layout, and the idea that a nosewheel undercarriage is revolutionary would be ludicrous. Yet, almost to the end of World War 2, these features were practically unknown—except in their application to the large number of Airacobras then flying.

A chequered career attended the Bell P-39 Airacobra. Its origin really lay in the large fighter Bell produced in the mid-1930s, which was fitted with twin engines driving pusher propellers. Ahead of each engine in a huge nacelle was placed a gunner and a 37mm cannon. The FM-1, as it was known, never entered production. As an off-shoot, Bell designed a single-seat single-engined fighter around the hefty 37mm Madsen cannon. Projected in the summer of 1937, it was intended to eliminate performance and armament weakness in American fighter designs. By using the large cannon, the considerable recoil called for compensatory factors, also the weight of the gun and ammunition posed problems of balance.

Clearly, fitment of the gun along the centre line of the fuselage was desirable and, because it would be hazardous for the gun to be synchronised to fire through the propeller disc, installation allowed it to fire through the airscrew hub. It was therefore decided to position the gun centrally in the nose, this necessitating the placing of the engine aft of the cockpit, and driving the propeller by an extension shaft some ten feet long. Since it was impossible to situate the shaft centrally, because of the cockpit and the gun, it

was fitted to the port side of the fuselage. As there was space in the nose it was decided to fit a long traverse nose-wheel leg, a feature eased by the large centrally placed load. A prototype 38-326 was ordered in October, 1937, powered by a 1,150 hp Allison V1710-17, and designed XP-39.


Tests began in April, 1939, but engine overheating led to larger intakes being installed. It was later discovered that the trouble lay with internal piping. On test flights the

machine reached 390 mph. Radiator intakes were repositioned in the wing roots following flight trials, leaving only the carburettor intake aft of the canopy. It was decided to fit a less powerful Allison engine in production aircraft, to hasten their delivery. Thirteen pre-production YP-39s, 40-27 to 39, had been ordered in April, 1939. The outbreak of the European war prompted an order for 80 production P-45s on September 13, 1939, (40-2971-3050) their designation being changed because so many modifications were to be incorporated. Before delivery they were to revert to P-39 designations.

Development of the YP-39s proceeded. Their engines gave less power, and greater weight—in part due to two extra machine guns being installed—

reduced the top speed to 368 mph. Their performance was further reduced by the absence of the originally intended turbo-superchargers. One machine was modified into the YP-39A high-altitude fighter with an Allison V-1710-31, and had a top speed of 380 mph. A rejuvenation of the prototype as the XP-39B occurred in 1940, when it emerged with a lower-powered engine, smaller canopy and armament as fitted to the YP-39s. Its 35 foot wing span at birth had been reduced to 34 ft and length increased by 13 in to 29 ft 9 in.

PROFILE

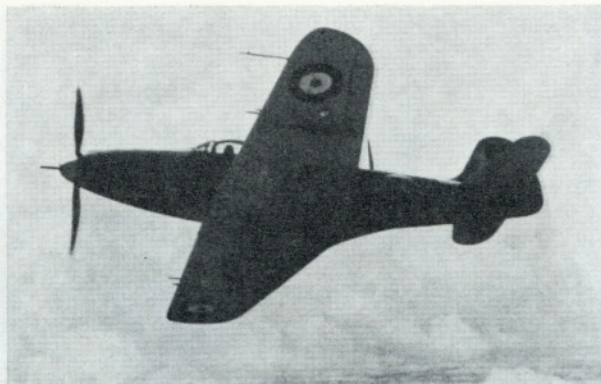


The Airacobra, fighter ahead of its time

Early designations having been allocated, the first production machines were P-39Cs. Only 20 were completed before production was switched to the P-39D. Similar to the YP-39, the P-39C had a 1,150 hp V-1710-35 engine, bullet-proof glass and modified fuel tanks. Its 37 mm cannon had 15 rounds and was supplemented by two .30 in machine guns in the fuselage and synchronised, P-39Ds which followed were similar but for their armament of four .300 in guns, two .50 in guns, the 37 mm cannon and belly bomb racks. Loaded weight rose to 8,100 lb and performance was further reduced. Addition of a bomb load was a pointer to the future, for it was as a ground attack aeroplane that the P-39 was eventually to find its mark. In place of a bomb load, a 75 US gallons drop tank could be fitted. Of the P-39D-1-BE, 863 examples were ordered as 41-6722 to 7052, 41-7057 to 7058, 41-7080-7115, 41-28257 to 28406, and 41-38220 to 38563, these differing in having self-sealing fuel tanks.

An order for nearly 700 P-39s given by France was switched to Britain in 1940 and these, named Caribou, were known as P-400s to the Americans. By the time they were ready for delivery they almost resembled the P-39D and were armed with a 20mm Hispano Mk 1 cannon, had two .30 in machine guns in the nose and four more .30 in Colts in the wings. The first to reach Britain, DS173-175, arrived in July, 1941. DS173 went to Boscombe Down for trials and DS174 to Duxford, where she was seen to have green and brown camouflage with sky under-surfaces, spinner and band around her rear fuselage. Examples from the first batch, AH570-739, began to arrive in July, at a time when home-based fighters were having the brown in their paint scheme replaced by dark sea grey. Before issue to No 601 Squadron, the Airacobras—as they were now called—were therefore repainted.

Only about 80 P-400s reached the RAF, the remainder of the 336 built being transferred to the US Army for training, or forwarded sometimes after RAF use to the Russians, who found the machine ideal for ground support duties and eventually used over 5,000 P-39s. No 601 Squadron at Matlack, in Norfolk, received its first Airacobra early in August, 1941, but, equipped mainly with Hurricanes, moved to Duxford in the middle of the month. Throughout early autumn the squadron worked up slowly, receiving more Airacobras and applying its sky codes to the aircraft,



Roundels were carried beneath the wings on the Airacobra. At first a few aircraft had individual letters ast of the roundel: later they appeared ahead of the UF coding and a hyphen.

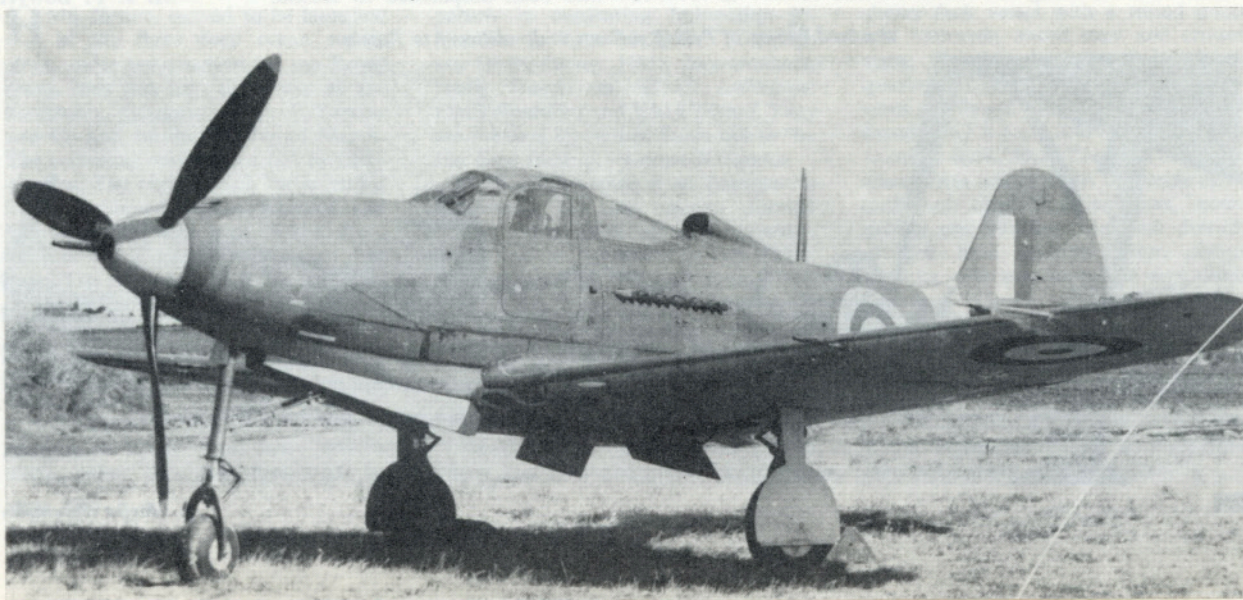
the 'UF' being immediately forward of the roundel on both sides of the fuselage and the individual letter forward of this and the door. AH577:UF-M was one of the first, others being J:AH579, O:AH585 and L:AH589.

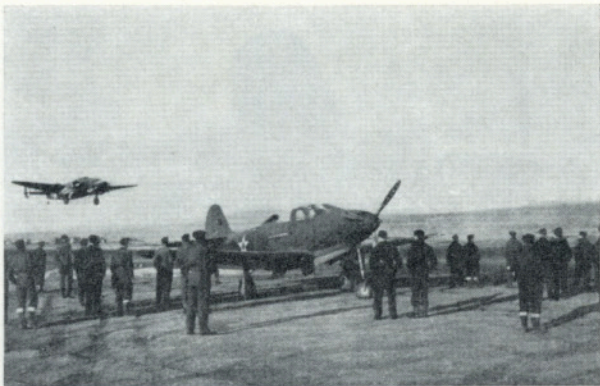
A revealing feature of some of the aircraft was a small replica of 601 Squadron's motif stencilled in black on the white strip on the fin. On October 9, the Airacobras made their first operational sortie, when a small number shot up targets on the French coast. Their poor performance and low altitude ratings of their engines, coupled with poor serviceability generally, made them unacceptable to the RAF. On January 4, still equipped with them, No 601 Squadron left Duxford and in March exchanged them for Spitfires, by which time the squadron was at Acaster Malbis. AH651, wearing green-brown/sky finish, was, however, seen long after this date at various East Anglian airfields, and is believed to have been used for army co-operation trials. An unusual specimen was AH574, which was fitted with an arrester hook for deck landing trials with the RAE, and could still be seen at Farnborough intact in 1948, its green-brown/sky finish much faded.

P-39s first reached the Army Air Corps in February, 1941, and were soon after assigned to the 31st Fighter Group.

Continued on next page

One of the early RAF Airacobras used for service trials at Boscombe Down.





An early American P-39 in Iceland. Olive drab and grey undersurfaces were the usual colours of US machines. In North Africa a rather dark shade of brown replaced the green. Fin serials were yellow or orange, and unit letters grey, white or yellow.

PROFILE—Continued

When America entered the war, about 600 had reached the Army. Shortly before, the type had been cleared for service outside the USA, some being despatched to Australia early in 1942. P-39Ds in their dark green and light grey finish were no match for the faster Japanese fighters, which out-climbed and out-maneuvred them. Some in the hands of the 8th FG, based successively at Brisbane, Townsville, and later in New Guinea, were P-400s lacking pilot's oxygen gear, which further reduced combat worthiness. These were also operated by the 35th FG from Brisbane in Australia, Delhi, India, and New Guinea in 1942 and '43. Whereas the prototype weighed about 6,200 lb, the P-39D tipped the scales at 8,200 lb, and had less engine power.

Many attempts to improve the design were now made. Four thousand P-39Es were ordered in October, 1942, with a 1,325 hp Allison V-1710-47, a 37mm cannon and six .50 in guns. These were cancelled in favour of the P-39F-1-BE, of which 229, 41-7116-7344, were built. Delivery began in December, 1941, and the P-39F resembled the earlier 39D except for its Aero Products airscrew fitted in place of the Curtiss type. Twenty-five P-39Js with an all-up weight of 8,250 lb were delivered in 1942, these featuring an engine change to the 1,100 hp V-1710-59 and auto boost control, serial numbers being 41-7053 to 56, and 41-7059 to 7079. A

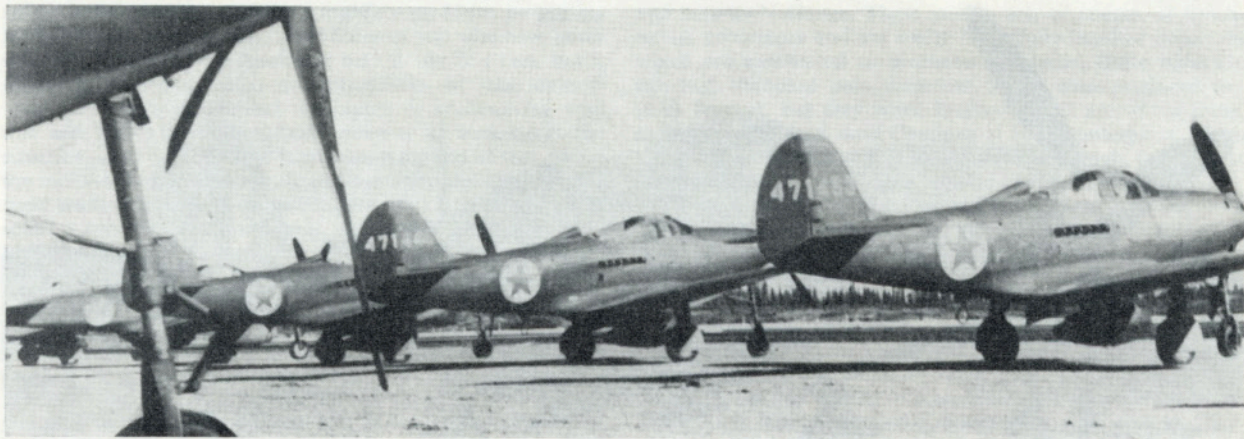
further engine change led to the P-39K, delivered in 1942 with a V-1710-63 engine of 1,325 hp, all-up weight of 8,400 lb and a top speed of 368 mph: 210 were built as 42-4244 to 4453. With a Curtiss propeller and provision for rocket projectiles, the P-39L appeared in August, 1942, 250 being delivered as 42-4454 to 4703.

Fastest version of the Airacobra was the P-39M which, with a 1,200 hp V-1710-83 engine and gear ratio changes reached 368 mph. Its engine gave 1,125 hp at 15,500 feet and delivery of the 240 built, 42-4740-4943, began in October, 1942. It was at this time that a resurgence of Airacobra activity began in Britain, three squadrons of the 350th FG, Nos 345, 346 and 347, forming here and equipping with P-400s at Duxford and Snailwell in Cambridgeshire. Many were from the British BX135-434 range, others from the AP264-384 and BW100-181 series. After training the units took their aircraft to North West Africa. While in Britain, these aircraft wore green and brown camouflage and had sky undersurfaces. They retained black RAF fuselage serials and had yellow outlines to the US insignia above the wing tips and on the fuselage sides. BX-288 was one example, others were BX-209 and BX-365.

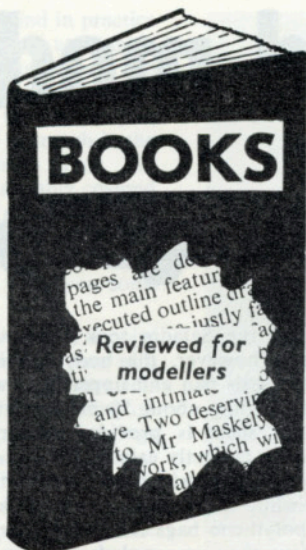
During November, 1942, the first P-39Ns reached the US Army. Basically, this version had less fuel and was therefore lighter. Its engine was changed to the V-1710-85 of 1,200 hp and it also had a different propeller, changes brought about by the availability of equipment and engines. 2,095 P-39Ns were delivered as 42-4944-5043, 42-8227-9726, and 42-18246-19240. Most numerous of all the Airacobras was the final version, the P-39Q, delivery of which commenced in March, 1943. Many of the 4,905 built were delivered to Russia. Its V-1710-85 engine gave it a top speed of 385 mph. This was the first version of the Airacobra to feature an armament change since the P-39D, having a 37mm cannon and four .50 in machine guns. One machine gun was carried in a blister beneath each wing. Fuel load was increased and a 250-gallon tank could be fitted for ferrying. P-39Qs were used by the 332nd FG in Italy at Montecorvino and later Capodichino in 1944, but the cannon constantly gave trouble and, after a few weeks, Thunderbolts replaced the Airacobras, which had been used for convoy escorts, harbour protection and armed reconnaissance duties. Two versions, the P-39Q-21 and 25-BE, each had four-bladed propellers. When production was terminated in July, 1944, over half of the P-39s built had been despatched to Russia.

M. J. F. Bowyer

A mixed line-up of P-39Q variants under delivery to Russia.



NEW BOOKS



With modellers in mind

PROFILE PUBLICATIONS. A series of aircraft monographs, published at the rate of four per month, by Profile Publications Ltd, PO Box 26, 1a North Street, Leatherhead, Surrey. Price 2s each.

THESE booklets, although of general use for the aerophile, are obviously aimed at the model maker. For the purpose of obtaining accurate illustrations of camouflage schemes and details—in colour—they are magnificent. The standards set in the first three months of publication leave very little to be desired, and for those wishing to convert existing plastic aircraft kits into a variety of different colour schemes there can be no better.

Four aircraft are dealt with under separate covers each month. Catering for all tastes, a selection is made from World War 1, 1919-1939, World War 2 and post-war aircraft types. The booklets can be bought separately or by subscription and they contain, apart from a lengthy history of the type under review, a full page of five views plus another page of as many side views as can be squeezed in—all in colour.

Interspersed in the text are useful and sometimes rare photographs of the aircraft type and its various marks, generally in squadron or unit markings. There can be nothing but praise for the originators of these booklets. Their enterprise has afforded the model maker with yet another first-class source of reference and the new series of publications will do much to supplement and enlarge on existing knowledge.

Guaranteed to appeal

THE SPLENDOUR OF STEAM, by C. Hamilton Ellis. Published by George Allen and Unwin, Ruskin House, 40 Museum Street, London, WC1. Price 63s.

THERE are few who can match Hamilton Ellis's enthusiasm for railways and steam locomotives, and even fewer who have his gift for literary and artistic expression. Couple this with an expert knowledge of the subject, and a fund of memories reaching back through the really great years of railways, and you have a formula for a railway book guaranteed to appeal to all enthusiasts.

In 'Splendour of Steam', Hamilton Ellis has painted and described in 34 separate essays, subjects of his own choosing.

May, 1965

They range wide, mainly over the railways of Britain, but also include experiences gained in the Isle of Man, Ireland, and several Continental countries. There are reproductions of some really superb paintings, two favourites being a quaint little 2-4-0 tank locomotive of the German Moselbahn, and an impression of a Paris Orlean Railway 2-4-2 of the 1880s, with the entire boiler and boiler mountings finished in polished brass. This book can be recommended as a feast of pleasure for all admirers of the steam locomotive.

Suspended services

PASSENGERS NO MORE, by G. Daniels and L. Dench. Published by Ian Allan Ltd, Terminal House, Shepperton, Middx. Price 21s.

THIS book details the many stations and lines that have lost their regular advertised passenger services within the period 1919-1963. Not every station is listed. For instance, intermediate stations which lost their service when a stretch of line was closed are not mentioned, only the terminal and junction stations at each end of the line. Even so, more than half the 96 pages are needed to list in tabular form the hundreds of stations and branch lines where services have been suspended.

There are over 60 illustrations, most of which are of great interest. They range in period from the 1920s, when growing road competition brought about the first closures, to as recent as November, 1963, when the Hayling Island branch closed. Most of the early photographs are by H. C. Casserley, and come as a reminder of the debt we owe him for his record work in railway photography in the 'twenties and 'thirties.

Map references quoted refer to Ian Allan's 'Pre Grouping Gazetteer' and in conjunction with this earlier published work 'Passengers No More' is a valuable source of reference.

Learning by building

AEROMODELLING, by Vic Smeed. Published by W. and G. Foyle Ltd, Charing Cross Road, London, WC2. Price 4s.

THIS new book on the subject of flying model aeroplane construction is a practical introduction offering four or five models of various basic types that can be built simply from the drawings and instructions in the book. All existing types of model are described, but the detailed construction is concentrated on these basic simple types, so that the beginner knows what the hobby has to offer and can start off on a sound footing. The price is also right for the kind of market at which the book is aimed and, though small, it gives an admirable introduction to the hobby.

Flying—at first hand

WHAT WERE THEY LIKE TO FLY? by Squadron Leader D. H. Clarke, DFC, AFC. Published by Ian Allan Ltd, Terminal House, Shepperton, Middx. Price 30s.

SURELY many readers will recall the series of interesting articles written by S/Ldr (Nobby) Clarke in *RAF Flying Review* some two years ago? His style and breezy attitude to the flying of RAF aircraft has brought him certain fame as a chronicler of the pilot's opinion of some of the more famous war-time aircraft, and his sometimes bitter criticism of their handling qualities has been the cause of a few raised eyebrows and many a lengthy discussion on his statements.

Whether you agree with the author's views or not, his writing style, if unorthodox, is interesting and we went through the pages of this book with delight. Out of the 50 aircraft types in Clarke's log book, 36 are discussed in this book, which also has a number of the author's own photographs to illustrate the stories.

New kits and models



MORE MILITARY ACCESSORIES

LATEST military scenic accessories released this month in the prolific Bellona range are a set of four 'earthworks' for OO/HO size model soldiers. Two foxholes, a slit trench and a machine-gun nest make up the set, which costs 2s 6d, postage 9d. All four pieces are supplied on a single web, from which they can be cut with scissors. Given a rough 'earth' texture, they only require painting with water colours to be able to take their places on a miniature battlefield.

Designed to be free-standing, the foxholes and the trench actually use the table-top or baseboard as the 'bottom', with 'earth' built up round them to give the correct depth. Though this method is somewhat artificial, it seems to be the only real answer to the physical impossibility of digging small foxholes in the carpet or on the dining room table! On a sand table or permanent military layout they could, of course, be bedded into the scenery. The foxholes take a single kneeling Airfix soldier and the slit trench takes up to four, though we found that in some cases a sliver of plastic had to be cut from a figure's base to make it fit. The machine-gun nest is a small emplacement which will take virtually any sort of infantry support weapon, besides a machine gun.

Bellona have also introduced several improved replacements for earlier models. Chief of these is a haystack with one end cut away to provide a hide for a sniper or observation officer. Price is 3s 6d. Others are shown in the illustration. All are available by post from Merberlen Ltd, Hawthorn Hill, Bracknell, Berks.

C.O.E.

AFVs FROM JAPAN

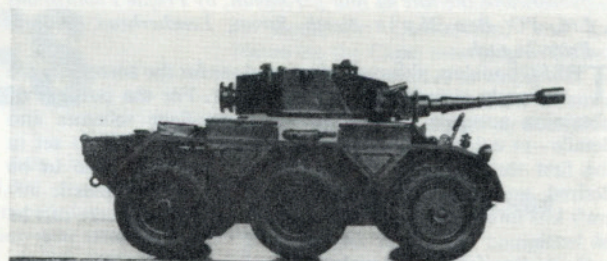
BMW Models of Wimbledon, already well known as importers of Japanese aircraft kits, are now introducing their first two military kits from the same source.

Made by Tamiya Mokei, the kits are of two British armoured cars, Saladin and the less-familiar Coventry Mk 2, which never saw full operational service. Both are to 1:35 scale and both are supplied with Mabuchi 3 volt electric motors, plus all the necessary wires, battery holders, contacts and gears necessary for motorisation. Very clear wiring instructions and an ingenious assembly method make this part of the construction literally a matter of minutes.

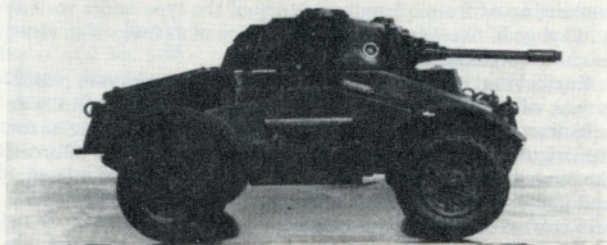
The Coventry proved to be the simplest of the two and also the quickest to build. I took only an evening on this

one, while the Saladin took more than twice as long. In each case, however, the body consists of only two main parts, a chassis pan and upper hull, with all the other components totalling about 50 pieces. A good, fully illustrated, instruction sheet is provided which, although written in Japanese, is perfectly easy to follow. A praiseworthy feature is a sprue chart which makes location of the parts very simple, while the sprues and other parts are packed in individual polythene bags inside the box, so that no pieces are lost before they are needed.

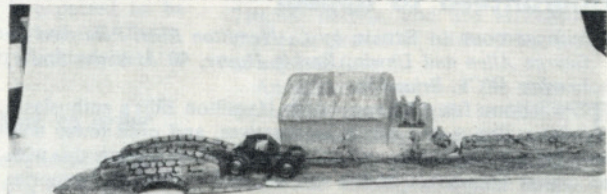
Both models have steerable front wheels, opening hatches and opening engine covers, but the figures provided are in



ギリス装甲車 "サラディンMK2"
られた軍用車の仕立式装甲車です。その前部上の主要部品は後部で



（ギリス装甲車 "COVENTRY" について



Top to bottom: New Japanese 1:35 scale armoured car kits: Saladin (top) and Coventry Mk 2 (both from BMW Models). Bellona 'replacement' models: stone culvert, haystack with sniper position, road section and bridge. Slit trench (left), foxhole and machine gun nest from Bellona.

Japanese-type uniforms and are best discarded altogether.

A design fault in the Saladin—not apparent from the instruction sheet—means that a section of the right-hand chassis side has to be sawn out to allow the rear axle unit to be fitted. But this is a relatively minor task, not beyond the average modeller.

The batteries—Ever Ready D14 type, not supplied—give useful adhesion weight low down, and the Coventry has a lively performance both forward and reverse, taking minor obstacles in its stride. Unfortunately I was unable to test the Saladin, as the gear unit became accidentally seized up when I inadvertently dropped it. With six wheels, however, it should go even better than the Coventry.

Minor criticism must include the rather flamboyant and non-authentic transfers—also best discarded—and some small distortion in the dimensions. But these do not detract from the true 'character' which the completed models capture, and on the credit side are most realistic rubber tyres and some very nice detailing, including even the fire extinguishers and rear-view mirrors in the Saladin.

At a mere 13s 6d each (UK price) these two kits represent excellent value for money and make an amusing and interesting diversion from the more serious business of assembling small scale AFV models. It is also worth mentioning that they go perfectly with Britains' large-size model soldiers.

C.O.E.

AMERICAN RANGE

ALTERNATIVE import and distribution arrangements are being made in this country for the American range of Aurora kits, and one future source of supply—from early May—will be B. J. Ward Ltd, 130 Westminster Bridge Road, London, SE1. They expect to have available a full range of Aurora kits, including 1:32 scale sports cars and hot rods, together with customising kits, famous warships, historic ships, plus 1:25 scale aircraft and tanks. We hope to give more and fuller news in future issues. D.R.

SAINTS AND SELLERS

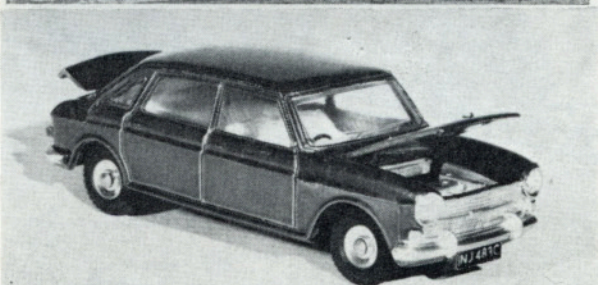
RECENT Corgi die-casts to be released are three interesting models of unusual prototypes. They are a mobile canteen, a Wall's ice cream van, and a replica of 'The Saint's' Volvo P1800 car.

The mobile canteen has been built on to a Smith's Karrier chassis and is fitted with a new Corgi feature, 'Trans-O-Lite' glow lighting, which illuminates the neon 'Snack Bar' sign over the cab and also provides the strip lighting in the van itself. A hinged counter can be lowered from the offside, revealing hot plates, a tea urn, cash register, sink, grill, butter dish and so on in the interior. The figure of the chef himself, inside the van, can be moved by a knob set into the roof. Finished in blue and emblazoned with 'Joe's Diner' and 'Snack Bar' signs, this Corgi also features Glidamatic spring suspension, windows, seats and a steering wheel. It is 3½ inches long and costs 6s 3d.

The Wall's ice cream Ford Thames 5 cwt van has been released in a presentation pack, including a uniformed figure of the driver handing an ice cream to a small boy.

Top to bottom: Corgi replicas of 'The Saint's' Volvo P1800, and mobile canteen. Matchbox King Size Hatra tractor shovel and GMC tractor and hopper train. Dinky Austin 1800 and Victor 101 saloons. Matchbox Chevrolet Impala taxi and Dodge wreck truck.

May, 1965



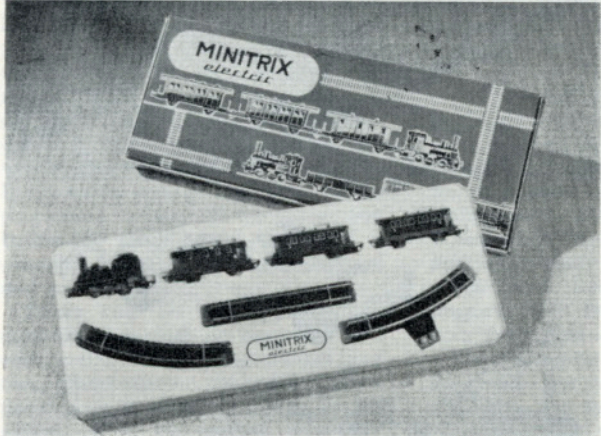
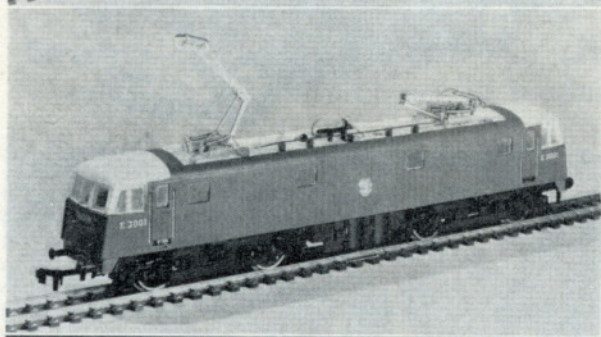
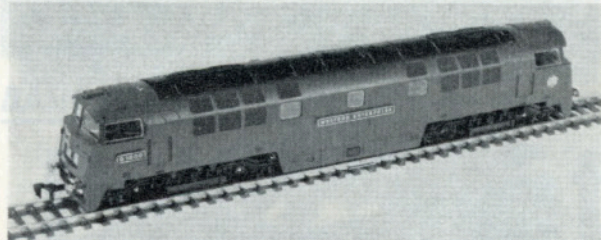
New kits and models—Continued

The van itself features a specially built 'pagoda' body housing the freezer and fitted with sliding, clear windows. The whole thing is finished in authentic Wall's livery—pale blue and cream—with appropriate insignia and a striped canopy roof. This 3½ inch long model also has all-round suspension, detailed cab interior and plated bumpers and grille. It sells at 6s 11d.

Third member of this latest Corgi trio is 'The Saint's' Volvo P1800. The Saint himself is seated at the wheel and a Saint emblem on the bonnet confirms his identity. The Volvo is finished in white, with silver flash and red interior trim, and boasts jewelled headlights and spring suspension. It is 3½ inches long and costs 4s 6d. *D.C.N.*

TWO NEW LOCOS

SEVERAL of the new additions to the Trix range for 1965 are now reaching the shops. Foremost are the two new locomotives for 16.5 mm gauge; the E3000 Class electric, as built for the LMR Euston-Liverpool electrification, and the Western Region D1000 Western Class diesel-hydraulic. Both locomotives feature five-pole motors, working headlights both ends and, from the photographs supplied, they would appear to be



superbly detailed and accurate in outline. They cost £5 19s 6d each.

The first train set in the new 9 mm gauge Minitrix range should also now be available. The set includes a Continental outline 0-6-0 tank locomotive, three four-wheel carriages and 5 ft 6 in of track. It costs £6 17s 6d, and the curved track radius is 7 inches. *N.S.*

SLOT RACING NEWS

ONE of the most exciting developments since the inception of slot motor racing is the new four-wheel-drive chassis which has been developed by Model Road Racing Cars Ltd, of Bournemouth (now a member of the Airfix Group of companies). It must be stressed that this new item will not be available in the shops until around mid-May. Production is due to start shortly, and we hope to give more news of this latest item in a forthcoming issue.

The MRRC range of slot racing equipment provides a comprehensive choice for the more serious and enthusiastic model motor racer. An extensive selection of gears, wheels, tyres (in both hard and soft rubber), vacuum formed body shells, electric motors (including a new type that employs ball-races), steering units, track sections, variable speed controllers, and a host of other useful equipment is featured in the range. MRRC items are now becoming far more generally available, with many Airfix retailers beginning to hold stocks. *D.R.*

MORE SALOON MODELS

LATEST to join Dinky Toys' die-cast model cars range are a miniature Vauxhall Victor 101 and an Austin 1800. The Victor 101 is finished in bright carmine red and boasts several completely new features. These include inset 'chrome' window frames and a new type of reflecting headlight, known as the Dinky 'Hi-Lite.' Both the bonnet and boot lids open, and a silvered 'dummy' engine is fitted. Interior trim is moulded in off-white plastic with a black steering wheel, and other equipment includes Prestomatic steering, four-wheel suspension, number plates, windscreen wipers and under-chassis detail. The Victor is 4 inches long and costs 7s 11d.

Dinky's model of BMC's latest big saloon, the Austin 1800, is finished in metallic blue with red interior trim, and includes the new-type window frames and headlights featured on the Vauxhall, plus opening bonnet and boot lids, detailed 'dummy' engine, luggage, Prestomatic steering, all-round suspension, number plates and chassis detail. This 3½ inch long miniature also sells at 7s 11d. *D.C.N.*

LATEST LINE-UP

MORE news in the die-cast line comes from Lesney. Their latest Matchbox releases are a 1:85 scale Dodge wreck truck and a 1:72 scale (aircraft modellers take note) Chevrolet Impala taxi.

The Dodge is finished in bright green and yellow, and features authentic BP transfers, tinted cab windows, imitation red roof light, unbreakable plastic towing hook, cast jib and winding gear, and number plates. This 3 inch long Matchbox miniature costs 2s.

Another American vehicle, the Chevrolet Impala taxi,

New from Trix (top to bottom): Western Class diesel-hydraulic and E3000 Class electric locos, and 9 mm gauge Minitrix set.

Airfix Magazine

forms a handsome model in this small scale. It is finished in yellow and has spring suspension, windows, interior trim, driver, unbreakable plastic towing hook and an authentic 'Taxi' transfer on the bonnet. Plated bumpers and grille complete this 2½ inch long, 2s replica.

Other Matchbox models are the Major Pack GMC tractor and hopper train and a King Size Hatra tractor shovel. The American Fruehauf hopper train with its GMC tractor/cab unit is finished in maroon and silver and features authentic Fruehauf transfers, cab windows and suspension, towing hooks and rings and fully working hoppers. Packed in a full colour giant 'Matchbox', the 11 inch long, 1:67 scale model costs 9s 11d.

The Hatra is the King Size version of the popular Matchbox mini-model and, finished in the same orange shade, it features cab windows, balloon tyres, authentic Hatra transfers and an operating shovel. This shovel is worked by miniature 'hydraulic' rams and will tip, swivel and elevate to any position. Length is 5½ inches in 1:61 scale and the price is 7s 11d. D.C.N.

NEWS FROM IPMS

AS mentioned last month, the second annual general meeting of the International Plastic Modellers' Society was held on Friday, March 26, at the Colour Film Services Ltd cinema in Portman Close. During the business part of the meeting, the retiring Executive Committee was returned intact, together with the addition of two new elected members. The Committee now consists of the following officers:—W. R. Matthews, President; W. L. Baxter, Vice-President; R. R. Wainwright, Hon Secretary; D. R. M. Oxford, Hon Treasurer; R. C. Jones, Editor; J. R. Chisman, Membership Secretary, (also London Area Secretary); C. O. Ellis; F. J. Henderson; J. P. L. King Spooner; and R. J. Hoefling.

The second issue of the new-style IPMS Magazine, for February, has at long last been circulated. The March issue is very nearly ready, and will have been circulated by the time this appears in print. The delay with the February issue was due entirely to teething troubles with printing, and these have now been cured. It is perhaps worth mentioning, though, for the benefit of those who wonder why we are still dealing with March when commercial magazines have already issued April or May numbers, that our release date is the last week of the month concerned, not the last week of the preceding month.

From the beginning of April subscriptions for new members will be reduced by one quarter to cover the period to the end of the year. This follows the practice introduced last year, and means that from now until the end of June senior members will pay 22s 6d and junior members 11s 3d. Overseas members, regardless of age, will pay 31s 6d. A further reduction will take effect from July 1.

The next London meeting of IPMS at the Porcupine will be on Friday, April 30, and it is hoped that this will be the last prior to a change of venue. The Welsh branch of the Society is hoping to organise a meeting in Cardiff during the early summer—details will be given a little nearer the time. The Merseyside branch is very active in Liverpool and meetings are held regularly. Two outings are planned by this group, one to an aircraft dump near Manchester and the other to Speke Airport. While it is not apparent from the planned outings, the main interest of this branch is in military modelling. A branch subscription of 5s a year for seniors and 2s 6d a year for juniors is charged, together with a nominal 3d a week. Anyone requiring further details should contact the Area Secretary, J. Nelson Ewen, 4 Corona Road, Waterloo, Liverpool, 22. R.R.W.

May, 1965

OPEN

Now open to all enthusiasts

The *Old Motor* showroom is now open to all interested in transport of every kind. It is London's newest establishment for the enthusiast, where all that is best on the market can be seen; from magazines, books, etc., to prints and postcards; information is always available there on all that is going on of interest, such as rallies, exhibitions and conferences. The *Old Motor* showroom is run by enthusiasts for enthusiasts.

If you are in the Piccadilly area, pop in, we are always at your service.

OLD MOTOR SHOWROOM
17 AIR STREET, LONDON, W.1

ARE YOU A KIT CONVERTER?

We have many letters from readers requesting back copies of **AIRFIX MAGAZINE** containing conversion articles. Back copies of many issues are still available for the benefit of readers who may have missed or mislaid earlier editions. For example, here are some of the practical articles which have appeared in recent issues.

1964: July—Morris trucks from Airfix 'Quads'. **August**—Converting Airfix Hunter and HMS Hotspur kits. **September**—Motorising the Airfix Saddle Tank. **October**—Converting the Airfix Ju 88. **November**—Conversions with the Airfix Centurion. **December**—Carrier conversions and Catalina Profile. **1965: January**—Armoured cars for the Afrika Korps and motorising the Airfix Evening Star. **February**—More German eight-wheelers from the Airfix armoured car and P-36A conversion with the Airfix Kittyhawk. **March**—More conversions with the Airfix Centurion tank. **April**—Making Japanese Infantry equipment and converting the Airfix Boston IV into an A-20G.

Would readers please note that the following issues are now out of print: all 1960 editions; all 1961 editions; January, February, March, April, May, June, July, August, September and October, 1962; August, September, October, November and December, 1963; February, March, April, May and June, 1964.

Back copies cost 1s 6d each (including postage) for all issues up to and including August, 1963. From September, 1963, onwards, the cost is 2s per issue, post paid. Please address all requests for back copies, together with your remittance, to our circulation department at **SURRIDGE, DAWSON (PRODUCTIONS) LTD, 136/142 NEW KENT ROAD, LONDON SE1.**

Letters to the Editor

Letters to the Editor can only be answered in the magazine. Readers whose letters are published each receive a free Airfix plastic construction kit of their choice. We are always pleased to receive your comments and pictures, which will be considered for publication. Submitted material and pictures can only be returned if accompanied by a stamped addressed envelope, and the Editor cannot accept responsibility for safe keeping of any such contributions, neither does he necessarily agree with comments expressed by correspondents in the letters column.

Polythene 'water'

I WOULD like to offer a useful suggestion to readers who enjoy taking photographs of their models. It is very difficult, if not impossible, to photograph model ships on water as they are constantly at the mercy of wind and tide. I have overcome this problem by large sheets of polythene. The polythene, preferably two or more thicknesses, is crumpled up to give the effect of waves and then flattened out on the ground. The battleships, etc, are laid on it in appropriate positions. It would be advisable, however, to make sure that there is no strong sunlight shining on the polythene as it may cause glare in the camera lens.

The photographs are usually indistinguishable from actual water!

Barry Wildsmith, Batley, Yorks.

Converting figures

IN reply to the letter from reader Keller in the March issue of AIRFIX MAGAZINE, complaining about the difficulty of converting and painting Airfix 20 mm soldiers, I would like to mention some methods which I have found effective in dealing with these figures.

Initial 'surgery' for conversions is, of course, simpler with the soft plastic used than it would be with a hard polystyrene, and a razor-blade is a perfectly adequate tool for this. Joining parts together can be a great problem, but the answer certainly lies in abandoning glue and using a welding technique, melting the plastic with a hot knife or similar tool.

This method has solved all my problems in this direction; arms can be transplanted, half-figures joined at the waist, stands fixed to horses and horses to riders. What is more, such joints are permanent and appear to be practically as strong as the original parts of the figure. In addition, a milder degree of heat allows arms and legs to be bent permanently into new positions without any cut-

ting or bending. 'Welding' these figures is not at all difficult with a little practice, and requires no more in the way of equipment than an old knife and a gas-ring.

For certain jobs, such as attaching heads, where welding tends to result in a figure with no neck, I find pinning parts together a very effective substitute (it is best to make the holes first with a complete pin, and then use a short cut-off piece to make the final joint; forcing it well down makes an 'invisible' pin).

Pins can also be used for weapons, particularly the softer types which, after removal of the head, can have the blunt end slightly bent and hammered to make a rifle butt (the Airfix cowboy running, for instance, can be converted into a splendid charging Zouave by this means); with Scotchtape, or similar, short lengths of pin can also be made into other weapons (I have produced lms for the German combat group in this way, using a lying rifleman with his arms bent by heat into a suitable position, and a bipod mounting made out of fuse wire). The point end of a

pin, heated red hot, can be 'welded' into a man's hand to form a sword.

There are a few conversion jobs for which neither of these methods are ideal, such as the attachment of small and fiddling parts to men or horses. For these I have found Uhu universal glue fairly effective, especially when supplemented by an overall coat of enamel, but I must admit that the joint made is much weaker than by the other methods mentioned, and breakage can occur if the figure is, for instance, dropped on a wooden floor. Examples of things attached in this way on my figures are blanket rolls, sword-scabbards and rifles to cavalry horses, plumes to hussar busbys (my hussars are converted cowboys, with 'carved-up' guardsman head and pin swords) and pennants for lancers.

As to painting, I have not found any real problem. My 2,000 or so figures are used regularly in war-games, and I have not found that handling removes the normal plastic enamel paints, such as Airfix or Humbrol, except from very narrow and flexible projections such as bayonets and swords (the latter can,



Reader L. M. Bungey, of Trarner, South Australia, sent us this picture, showing the novel way in which he displays his model aircraft collection. He mounts the models on bicycle spokes of various lengths and this method has enabled him to accommodate over 100 models in an area of only 10 square feet.

of course, be replaced by pins as mentioned above). It is true, however, that children can remove the paint pretty quickly, and it is advisable not to dump figures in heaps in their boxes. Most of mine live on balsa trays carrying four men each, attached by double-sided Sellotape. This reduces handling of the figures as well as making them easier to move in 'battle'.

I am sure all these methods are known to experienced modellers, but I have not seen them mentioned and hope they may be of some help to others as well as Mr Keller.

Finally, as a fairly recent addition to readers of AIRFIX MAGAZINE, may I congratulate you on an excellent publication, and add my voice to the horde of advisers on future models—how about Napoleonic figures in the OO range? Perhaps a 'Waterloo' set with infantry, cavalry and artillery of both sides?

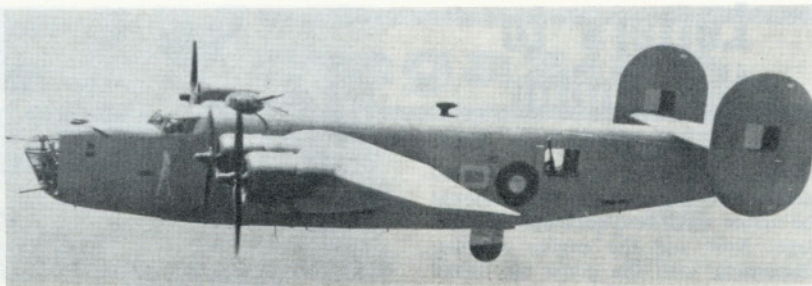
G. R. P. Gush,
 Tunbridge Wells, Kent.

Kit club

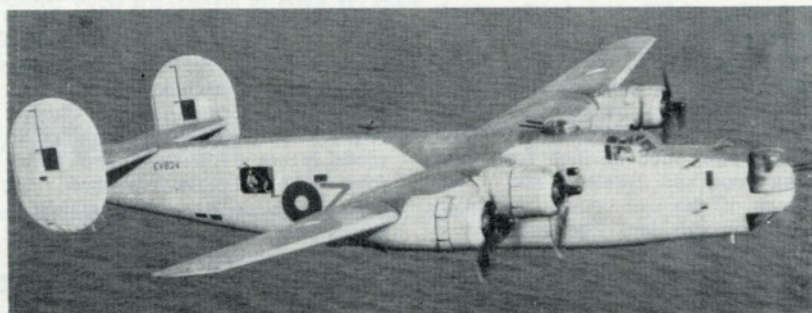
THE price of kits in New Zealand has set me thinking. How about some enterprising people forming a plastic kit club to operate in the same way as some book and record clubs? Here in New Zealand a record club sells LPs at one-third the shop price and evidently makes a profit. Would it work with kits? What do readers think?

This kit club, which should be international, and *must* include New Zealand (!) would operate something like this: For an initial payment, members would receive 'any three (four, five, etc) kits free, from this list'. Here follows an impressive list of exciting choices. The obligation would be to promise to purchase a certain number—say six—during the next 12 months, from the club's list at manufacturer's prices. There are several variations on this theme, of course. All tastes would have to be catered for: military, cars, planes, etc, with maybe a few novelty items or bonuses thrown in now and then. I had first thought of Airfix launching this club as a sales advance (indicative of the high regard I have for Airfix) but perhaps this wouldn't be practicable with the lower-priced kits. So maybe an independent body handling all brands of dearer kits would be best?

This could be great fun. It would



These two Liberator pictures were submitted by reader K. O. Phillips, of Heathfield, Sussex. They show (above) a Mk 5 of P354 Sqn and (below) a Mk 6 of Z354 Sqn. Both were used by RAF SE Asia Command, based at Cuttack, Orissa, from 1943-45. They were used for shipping strikes and A/S patrols in the Bay of Bengal and on the Burma coast.



create international liaison between modellers, quite apart from reducing prices. Whoever starts this, please let me know. I want to become a foundation member from 'down under'. (An extra special kit for foundation members — from New Zealand—eh?)

James Cecil, Christchurch 2, NZ.

Double conversion

HERE are a couple of points for readers who are keen on tips and conversions. While reading the February issue of your much-enjoyed magazine, I was interested to see Mr Coe's conversion tip on the Heinkel III and its cupola. What I did when I converted my Heinkel was to take the end off one of the stand bases supplied with the kit, and after filing was able to obtain the right shape. The size of the base to be used is, of course, governed by the size of cupola needed.

The second conversion is not quite so easy as the former, but done correctly and carefully is more rewarding. It is a conversion from the Airfix Harvard to a Commonwealth Wirraway. Firstly construct the kit as usual, but omit the engine cowlings and cockpit and dispense with the U/C housing covers altogether. Now comes the tricky part: add $\frac{1}{8}$ inch thick balsa

Letters continued on next page

SLOT RACING PRIZES AT MODEL SHOW

BRITAIN'S largest miniature motor racing circuit will be one of the star features at the National Model Show, to be held at the New Horticultural Hall, Westminster, London, from August 24-28, 1965. Visitors to the Show will be able to compete against experts on the giant circuit free-of-charge, and prizes will be presented each day for the best times put up.

The British Hot Rod Association will also be exhibiting—for the first time in public—a model drag strip, complete with timing gear. Enthusiasts can bring along their own cars and compete against those of Hot Rod Association members.

In addition to several other model motorways, there will also be a number of model railway lay-outs, in various gauges, and a wide range of modelling kits will also be shown by the various exhibitors. Many well-known racing car drivers and crack railway engine drivers, plus screen, stage and television personalities who are model fans, will attend the show.

The National Model Show will be open from 10.30 am to 9 pm from Monday, August 24 to Friday, August 27, and from 10.30 am to 6 pm on the last day, Saturday, August 28.

Letters to the Editor

Continued

block to fire wall, between bulkhead and where the engine cowling should be added, and sand to shape of fuselage. Now add the engine cowling, dispensing with the given air intake and add a longer version, together with a different type of exhaust outlet. Fill in recess and add plastic stem cut to shape.

The two forward guns are added protruding from two emplacements directly in front of the cockpit on the top of the fuselage, made from plastic wood filler. The guns are made from stems melted to determined shape. Now add the aerial as usual, and also a pitot tube $1\frac{1}{4}$ inch from port wing root and fuselage side. Chop $\frac{1}{4}$ inch off the rear cockpit and place a gun in position. The last part is filing the tail to the correct shape. The best way of adding clarity to this description is to work from an accurate photograph as well; this will help on cockpit detail and markings and also on identification lettering.

While reading the conversion on the Ju88 last October, I noticed that you would possibly be doing one on the Ju188. I hope this may appear in the very near future.

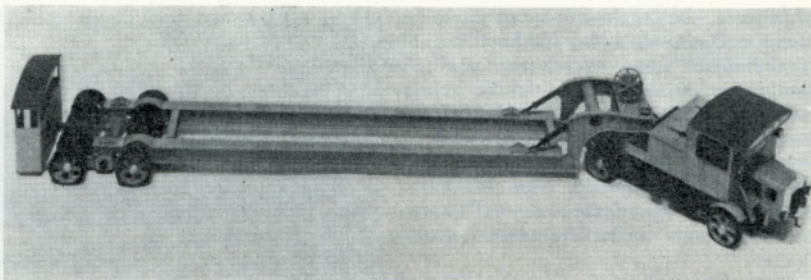
**P. Jary, Cleadon Village,
Nr Sunderland.**

Useful spares

I AM very pleased to hear of one of the newest Airfix releases, the Ju52. I am also very pleased to hear of the new Dog Fight Doubles series.

I thought readers would be interested to know how I use the spare parts from my models. I often find that I have coupling hooks from rolling stock left over, as I use Hornby Dublo couplings. I have found that they look very like machine guns and have proved quite successful as such when I converted my Walrus into a monoplane.

As readers will know, to lengthen the Airfix engine shed you have to buy another kit. When I had completed this conversion I found that I had one front, one back and some other parts left over. I assembled the hut-like addition that normally glues on to the end, but in this case I did not glue it to the back of the shed. I then



1:32 SCALE SCAMMELL 100-TONNER IN PLASTIC

SCAMMELL'S 100-tonner, the world's first road vehicle with this load capacity, and originally built in 1929, is often the subject of model makers' work. The latest miniature version of this machine has been built by Mr Clive Thornton-Jones, of Chester. A particularly interesting feature of his model is that it is made almost entirely from toughened polystyrene sheet.

To 1:32 scale, it is approximately 23 inches long overall and includes a host of detail features, such as telephone,

brake lever, dashboard, hand petrol pump, door handles and hinges. It took 250 hours to build and is finished in the livery of Edward Box & Co. Mr Thornton-Jones has also modelled a Vulcan XA type locomotive for the Scammell to carry.

Scammell Lorries Ltd are always willing to supply copies of engineering and GA drawings of their vehicles for model makers, although in one or two cases, particularly earlier vehicles, they cannot be supplied.

covered the opening at the back. In this case I used strips cut from the plastic that holds the parts together, which look like logs, but I should think that plastic card would be successful.

I also made a canteen, cutting the pieces from the shed front, though I should say that plastic card would be just as good. A front, back and roof must be cut, the front having a panel cut out of it. These pieces are glued together in U shape, one end being filled in with strips of plastic. A counter and shelf are cut from plastic. The counter is glued under the panel cut out of the front, and the shelf to the opposite wall. Tins to go on to the shelf can be made out of strips of plastic.

Two suggestions for models are an American Boeing Stratofortress and an Avro Vulcan.

Richard Bridges, Brierley Hill, Staffs.

Too many models

CONTRARY to the usual cry for new Airfix kits, may I make a plea to you to slow down? You have brought out so many fine kits of late that interest me, that I just can't keep pace.

To illustrate; at the moment I have just completed the *Mauretania* and the *Evening Star*, and am now rebuilding from a second kit the B type bus that sustained major damage on falling from

the top of a TV set. At the same time I have commenced the *City of Truro*, and the Dennis Fire Engine is awaiting my attention. Therefore, not too fast please, while I try to catch up.

Having been a model maker and model railway enthusiast since 1932, I can honestly state that in my opinion Airfix leads the field with all the various models, produced at a very reasonable price. May I also praise the excellence of AIRFIX MAGAZINE, which could only be enhanced by enlarging the reviews of new kits and models.

P. H. J. Pittam, Leeds, Yorks.

Alex the archivist

I HAVE no wish to start one of the endless arguments regarding old versus new which appear from time to time in the railway modelling magazines, but Alex Bowie's remarks in the March issue need some comment in case they are the thin end of the wedge into his own articles. These are excellent within their unavoidable limitations and the sketches provide the sort of data which we can no longer see around us—he is in fact one of the archivists he seems himself to distrust.

Without putting the pros and cons, for the reason stated above, may I just say that many mature schoolboys buy Airfix kits of vintage cars, piston-driven aeroplanes, obsolete tanks, historical ships, warships which they will never see

since they were sunk years before they were born, etc, through the Airfix range. Airfix have re-issued the *City of Truro* before the Deltic, which seems to show what they think.

So, Mr Editor, keep an eye on Alex in case he gets railbus-itis or diesel-tremens.

My request to Airfix? Re-issue the Deltic, please.

D. A. Mitchell, London, E9.

Alex Bowie comments: 'There isn't a dog's chance of Alex the Archivist setting up something suspiciously like a pressure group, even for Mr Mitchell, who puts things so nicely. The boys I quoted have a right to be heard, and so have the British Rail Organisers. My personal tastes and opinions don't decide this matter.'

'Too right about the arguments. One of the reasons why the magazines are now between the diesel and the deep blue sea is that some have encouraged too many arguments and too many cranks. A policy of live and let live would have been easier to handle.'—Ed.

Customising club

MAY I congratulate Airfix on the recent kit of the Lotus-Cortina. I have customised many Airfix models, including a futuristic Jaguar E-type,

custom Zodiac, MG 1100, Volkswagen and Rapier kits, and a dragging Renault Dauphine, complete with a 'hot' engine.

Perhaps a 'Customising Cars Club' could be started up in my area? Would any readers who are interested please contact me. Finally, may I end this short note by congratulating Airfix on their excellent magazine, and outstanding range of kits.

B. D. Garrett, 19 Manstead Gdns, Chadwell Heath, Romford, Essex.

Simple swastikas

I THOUGHT some of your readers might prefer to paint their own swastikas on models of German aircraft, rather than purchase an additional sheet of transfers to obtain them. I have had reasonable success using the following method:

1. Paint a small, white square (corners vertical) on the fin of your model.
2. Using a fine brush, paint a black Greek cross on the white area, its arms parallel to the square's sides.
3. Add arms to the cross to form the swastika.
4. Separate the arms of the swastika with a fine line of the background colour.

Colours used in the above opera-

tion can be alternated according to which type of swastika you require.

Incidentally, I echo the pleadings of other correspondents for some scale maintenance personnel, as my Airfix aircraft are slowly going u/s. I am also sure that many OO/HO scale figure enthusiasts would welcome a box of Airfix Royal Welsh Fusiliers and a box of Zulu warriors to combat them.

May you enjoy every future success with your excellent product and magazine.

Robert E. Barry,
Chicago, Ill 60646, USA.

Pen-friends wanted

THE following readers have written to the Editor requesting pen-friends. Ian Kerr (14), of 9 Tom-Na-Fackdir, Claggan, Fort William, Inverness-shire, wants a pen-friend aged 14 who is interested in military vehicles and model soldiers and who preferably lives in London. D. Phillips, of 12 Ings Lane, Griseley, Nr Leeds, Yorks, would like to get in touch with an American or Canadian modeller aged about 18, who is interested in modern and World War 2 aircraft, and also armoured vehicles. John Taylor (10), of 18 Bolston Road, Worcester, Worcs, would like to correspond with someone in India or Japan, aged between 10 and 12, who is interested in modelling. Gunnar Lindstrom, of Valutavagen 23, Hagersten, Stockholm, Sweden, whose hobbies are plastic kit building and slot motor racing, would like a pen-pal in England. Interested readers are invited to establish contact direct, at the addresses given.



MORE SUCCESSES WITH MRRC COMPONENTS!

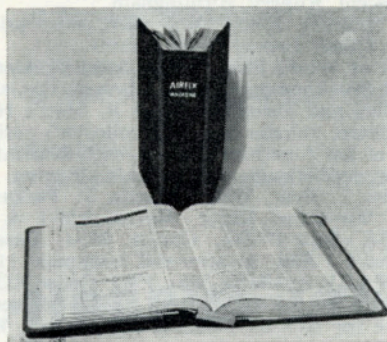
Photograph shows B. ADAMS with the cups and trophies he recently won in competitions at the Swanage track

YOU TOO CAN WIN WITH MRRC

Send stamped addressed envelope for lists to:

MODEL ROAD RACING CARS LTD.

29 ASHLEY ROAD, BOSCOMBE, HANTS. Tel. Bournemouth 38095



NEW SIZE AIRFIX MAGAZINE BINDERS are ready now—send for yours TODAY

We have arranged for Easibind Ltd. to supply self-binding cases to all readers who wish to retain their copies for future reference.

The EASIBINDER is designed to bind copies of AIRFIX MAGAZINE as you receive them month by month, eventually providing a handsomely bound volume for your bookshelf.

Quick and easy to operate, the copies are bound into place by a thin steel wire and locked together tightly by a patented device, that allows the binder to open completely flat for easy reading. Strongly made with stiff covers and attractively bound in red Leathercloth and Milskin, the binders have the title Gold Blocked on the spine.

ORDER FORM

To: Easibind Ltd., Eardley House, 4 Uxbridge St., Kensington, London, W.8.

Please send me AIRFIX MAGAZINE Easibinders at 15/- each post paid.

I enclose cheque/P.O. for Signed

NAME.....

ADDRESS.....

DATE.....

THE EASIBINDER—15s. each post paid

BELLONA

ADDS **REALISM** TO A LAYOUT
RAILWAY OR MILITARY

Over 60 Scenic Accessory Models
and tank prints Send 4d. stamp for list to:

MERBERLEN Ltd.,
Hawthorn Hill, Nr. Bracknell, Berks.

SURPLUS TO REQUIREMENTS?

If it's a plastic model, a kit, a magazine or anything else of interest to modellers, why not sell it or exchange it? Or if it's something you want, why not ask? You can do both for only 5d a word (minimum 5s) in a classified advertisement on this page. **AIRFIX MAGAZINE** reaches enthusiasts all over the world (even behind the Iron Curtain) so the chances are that someone, somewhere will have—or want—just what you advertise.

CLASSIFIED ADVERTISEMENT ORDER FORM

To: **AIRFIX MAGAZINE** (Advert Dept.)

3-4 St. Andrew's Hill, London, E.C.4.

Please insert the following advertisement in the next issue of **AIRFIX MAGAZINE**. I enclose my remittance ofs.d. (5d. per word)

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

(PLEASE PRINT IN BLOCK CAPITALS)

Take out an ANNUAL SUBSCRIPTION to **AIRFIX MAGAZINE**

Due to the ever increasing demand some readers may find difficulty in obtaining a regular copy of **AIRFIX MAGAZINE**. To avoid disappointment these readers are advised to take out an annual subscription using the form below.

To: Subscription Dept., **AIRFIX MAGAZINE**, SURRIDGE
DAWSON (PRODUCTIONS) LTD., 136-142 New Kent
Road, London, S.E.1.

*Please send **AIRFIX MAGAZINE** to me each month for one year commencing with the.....issue. I enclose my remittance for 24s. (Sterling) (U.S.A. \$4.50).*

Signed.....

NAME

ADDRESS.....

(Please use block capitals).

Subscriptions are also obtainable from Newsagents and Booksellers throughout the world.

CLASSIFIED ADVERTISEMENTS

RATES:—5d per word. Minimum charge for each insertion 5s.

FOR SALE: Aviation books, magazines. Old and new. Lists free. Overseas enquiries welcomed. Postal only. C. J. Pidler, 40 St. Mildreds Road, Ramsgate, Kent, England.

FOR SALE: Aircraft decals. S.a.e. for lists. Iliffe, 15 Sidelands Road, Stratford-on-Avon.

FOR SALE: Aircraft photographs. Latest lists and Spitfire specimen 1/6. Geminiaerofotos, 1 Copland Place, Tile Hill, Coventry.

FOR SALE: Airfix Magazines No. 1 (June 1960)-January 1964. Complete or would split. Livingstone, 66 St. George's Crescent, Cippenham, Slough, Bucks.

FOR SALE: Airfix Magazines: From No. 1 onwards. S.a.e. list. 7 Graham Crescent, Rubery, Birmingham.

WANTED: Frog Scimitar Kit(s). Will pay good price. J. Jeffs, 10 Rowan Close, Lee-on-Solent, Hants.

SHIPS: For details of World Ship Society, send 4½. stamp to: T. Creswell, 10 Brockhampton Road, Havant, Hants.

NEW!—for modellers and historians—Paul R. Matt's Historical Aviation Album, volume one of a collector's series. Four-page profiles of ten American aircraft, each illustrated with photos and a double-page 3-view scale drawing. In this volume: Curtiss F. Boat, Wright-Martin V, Packard-LePere Lusac 11, Waterman Racer, Martin BM-1 & 2, Curtiss-Wright T-32, Bell P-39Q, Curtiss SC-1, Cessna 120/140 and Lockheed F.80B. In semi-stiff wrappers, 11 x 8½, at 23/6, **POST PAID**. Available May 1965. Order NOW from: W. E. Hersant Ltd., 228 Archway Road, Highgate, London, N.6. Write for lists on aviation and armour. **WE BUY BOOKS.**

CATALOGUE FREE!

"Harleyford" proudly announce their 1965 28-page fully illustrated catalogue, size 5½" wide × 8½" deep, which describes their eleven current titles (also their twelfth title to be published on 1st October next).

All readers of this magazine who send us their names and addresses on a postcard will receive "for free" our catalogue, describing fully this series of magnificent aviation historical books, which cover the period—"from the dawn of flight to the latest military aircraft now flying".

Proprietors of model aircraft shops and book-sellers are also invited to write for a copy.

Write now to address below—Dept. AF/65

HARLEYFORD PUBLICATIONS LTD.
LETCHWORTH, HERTS, ENGLAND

MINIATURE

AUTOWORLD

(Formerly *Model Roads and Racing*)

The monthly magazine for everyone with an interest in model cars, motor-racing, miniature car collecting, raceway and roadway building, scenic modelling, etc.

All your favourite features and many new ones too. An old friend with a NEW exciting style . . . a NEW modern-image cover . . . a NEW name . . .

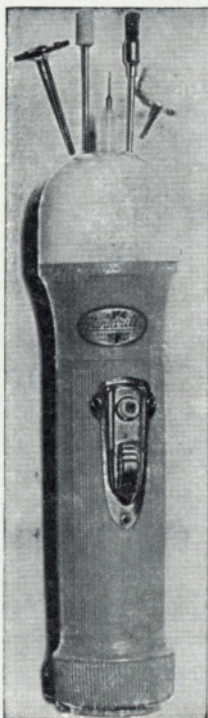
Bigger, Brighter and Better-than-ever!

April on sale

March 25th

2/6 monthly

PECO PUBLICATIONS . SEATON . DEVON



No. 1 MINIDRILL
27/6 INCLUDING
5 WORKTOOLS

Minidrill THE AMAZING BATTERY—OPERATED—DRILL

As used by BBC Engineers

Easy to carry • Easy to use • No skill required

Simple to operate — Specially designed to help everyone to do small or intricate drilling, grinding or polishing work where no "mains" electricity is available. Works on standard dry batteries.

The latest No. 9 Minidrill now develops ½ H.P. from a 12 volt battery or T/R unit and will drill aluminium, brass, copper and all non-ferrous metals.

Accessories now available for the Minidrill—

ROTARY FILES, CUTTING
TOOLS, BURRS, DRILLS,
SLITTING SAWS, ETC.

PRICES from - 2s. to 5s.

There are five different sizes of Minidrills.

No. 1	No. 3	No. 6	No. 8	No. 9
27/6	47/6	67/6	87/6	97/6

After exhaustive tests it has been found that "VIDOR" Batteries are ideally suited to the "Minidrill"

**Ask to see
these remarkable
appliances at your
local shop**

Trade enquiries should be sent to New Lines Marketing Limited, 11 Dryden Chambers, London, W.1.

AIRFIX MOTOR RACING



Just like the real thing!

Enthusiasts of all ages enjoy the excitement and realism of Airfix Motor Racing—handling a red Ferrari or green Cooper over lap after lap of winding circuit. And just like the real thing, you need skill to win. The set runs off mains or battery, and has rigid double track which can be arranged in a variety of track layouts. One of these includes a **perfect figure eight** with swooping, road-hopping fly-over! Being Airfix, the cars are authentic 1/32nd scale 'Grand Prix' models with full Ackermann steering for natural cornering. All cars and sets accessories are available separately.

THE AIRFIX MOTOR RACING MR.7 SET INCLUDES:
1/32nd scale Cooper car, 1/32nd scale Ferrari car, 2 speed controllers, 11 ft. of double track, 14 crash barriers, bridge supports, bankings. Many other extra accessories also available including racing pits, grand stands, lap recorders, press box, speed controllers and lots more.

COSTS ONLY **£3-17-6d** complete



or **£4.19.11d** with extra track. Also at **£6.19.11d.** with Lotus and Porsche cars and 15 feet of double track.

AIRFIX

MOTOR RACING

From Toy Shops, Model & Hobby Shops, and F. W. Woolworth.
Airfix Products Ltd., Haldane Place, Garratt Lane, S.W.18.